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VOLUME XXXIII OKLAHOMA CITY, OKLAHOMA, JANUARY, 1940 Number 1

Primary Panniculitis Afebrile in Type and Associated With Sclerodermatous-Like Changes

ONIS GEO. HAZEL, M. D.
JOHN LAMB, M. D.
OKLAHOMA CITY, OKLAHOMA

Known cases of relapsing febrile and afebrile nonsuppurative panniculitis are few in number, and because of the interesting and unusual association in our case of scleroderma-like changes in the skin of some areas we believe it worthy of report. The characteristic features of this disease is the recurrence of crops of subcutaneous nodules which in some cases remain separate, or, as in our case, may appear by confluence as lumps in the skin. They are usually tender accompanied by pyrexia of the recurrent type, with long periods of normal temperature. The nodules which at first are irregular in shape and poorly defined undergo atrophy of the adipose tissue, then fibrosis with complete removal of the subcutaneous fat, resulting in a circumscribed area of dimpling or depressed skin. In counterdistinction to this group Keil[1] reports three cases in adults which he calls afebrile primary panniculitis which involved the entire area of the anterior abdomen to the region of the breasts, but these bore no marked resemblance to our case.

Accounts of some sixteen cases of the so-called Weber-Christian disease have been recorded. Pfeifer[2] in 1892 described the first case under the title of "Herdweiser Atrophie des Subcutanin Fettgewebes." His patient, a 23-year-old female, for two years had had crops of subcutaneous hazelnut-sized nodules with resultant atrophy of the fatty layer which spread diffusely over the body.

The second case was an excellent report, as early as 1916, by Gilchrist and Ketron[3] which is about identical in all attributes to our case. In their patient, a girl 8 years old, only the lower extremities were involved, the subcutaneous infiltrations were not so distinct but more finger-sized lumps under the skin, simulating sclerodermatous tissue with involution resulting in sunken areas.

Weber[4] reported a case in 1925 with prolonged attacks of fever and with pronounced redness on the subcutaneous swellings, and another one with attacks of high fever. Christian[5] reported one in 1928. In 1933 one was reported by Alderson and Way[6], one by Netherton[7], and another by Weber[8] again which he felt was caused by ingestion of iodides. Brill[9] reported one in 1936, and in 1937 Bailey[10] added five cases. All reports previously had been of women, but he reported one in a man. This case died fourteen months after the onset. One of his cases (Case No. 4) resembles ours in that the fever was never recorded higher than 100 degrees.

The cause of this syndrome is undetermined. Blood cultures are always negative. Bailey suggests foci of infection in the teeth and tonsils in his five cases. In several cases the ingestion of halogens was a factor, both iodides and bromides, with remission when the drug was discontinued.

The injection of insulin, oils and paraffin lead to fat necrosis which resembles greatly the pathologic picture of Weber-Christian's disease. There is usually no disturbance in the fat metabolism nor marked changes in the fatty fractions.

CASE REPORT

R. B., a female, aged 11, admitted to children's hospital Oct. 18, 1937, with the single complaint of depressed areas over the

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known as panniculitis is rare and not well understood. The term implies an inflammation of the panniculus adiposus. The small group of cases that have been reported under the title of "Relapsing Febrile Nodular Nonsuppurative Panniculitis (Weber-Christian Disease)" have had certain clinical and histological characteristics in common; namely, (1) prolonged irregular fever; (2) subcutaneous nodules which undergo atrophy of the adipose tissue resulting in depressions of the skin resembling those found occasionally after injections of insulin and other substances such as pariffin; and (3) relapse.

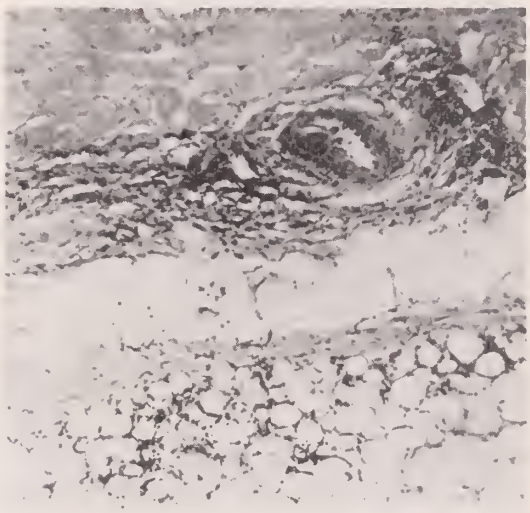


Fig. 5.—Low power of an early lesion. Marked inflammatory reaction in fat tissue. Endothelial hyperplasia of blood vessels. This process precedes the atrophy of fat.

H. Keil[1] gives the following classification:

(1) "Primary panniculitis is restricted to cases in which the pathologic alterations are confined to the adipose tissue over relatively wide stretches of the body and in which the etiologic factors are obscure. Suppuration does not occur. Two clinical variants are included, febrile and afebrile.

(2) "Secondary or coincidental panniculitis includes instances of idiopathis erythema nodusum, nodular erythemas of drug origin, erythema induratum, foreign body granulomata, etc."

We feel that our case belongs to the group described under the title, "Weber-Christian Disease," although it has had a more mild pyrexia than most of the cases reported under this disease. It differs in certain other characteristics in that in the early stage there is a greater response on the part of the corium to the inflammatory reaction in the panniculus adiposus than has been reported in the majority of the cases, however, Gilchrist and Ketron's[3] case did have lesions similar to the early lesions in our case, which they said did on superficial examination make one think of scleroderma. We believe that the thickening of the corium in the early lesions is a response to the chemically changed fat in the adipose portion. We know that the fat in this area has been changed chemically since it does not take the Osmic acid stain or the Sudan 3 stain. The fat is stained, however by Sudan 4, which does stain more different types of fat than do the above mentioned stains. The metabolism of fat storage and body assimilation of stored fat is not well known. We do know that in starvation states the fatty acids in the blood and liver are first utilized. Later the storage fat is called upon for reserves. We believe that the chemical change which has taken place in the fat tissue results in a foreign body type of reaction which is evidenced by the appearance of fibroblasts, lymphocytes, and endothelial cells, and perivascular changes in this area.

Differential Diagnosis

Dercun's Disease, which is painful, subcutaneous fatty nodules occurring principally over the lower extremities of aged women, has been considered, but this condition does not result in depressed lesions in the end stage. Nodular erythema of drug origin, principally the halogen group, may quite closely simulate this disease. Foreign body granulomata due to such substances as insulin and paraffin, will also produce fat necrosis and atrophy of the fatty tissue. The morphea form of scleroderma and Buschke's scleroedema adultorum have been given some consideration in the differential diagnosis.

Conclusions

(1) The etiology of the Weber-Christian Disease has not been established.

(2) A case of subcutaneous fat atrophy with a low-grade pyrexia and with early lesions resembling morphea is reported.

(3) An hypothesis of a chemical change in the nature of the adipose fat resulting in an inflammatory reaction and complete removal of fat, is offered in our case.

(4) We concur with others in the belief that the clinical-pathologic features suggest that panniculitis is a syndrome rather than a disease entity, and that the reticulo-endothelial response is involved in the phagocytosis of the panniculus adiposus.

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A Consideration of Certain Fractures of the Elbow*

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It is so obviously impossible, in the short space allowed, to cover in any way the common fractures of the upper extremity, that I shall spare you the customary paragraph of apology for narrowing my subject to a more particular field. I feel that but little of value can be added to the great subject of fractures of the upper extremity in a few minutes. However, there is one group of very interesting conditions, involving fractures of the lower end of the humerus, which I think will well merit a few moments of consideration. I refer to a small group of cases, representing only a minor percentage of the total of fractures in the region of the elbow, which require, and I may say demand, operative interference with accurate fixation, in order to secure the optimum result.

Let me confine myself even more closely to the field of that extremely interesting group of fractures of the condylar area of the lower humerus, particularly those fractures in children, which represent by far the major percentage of this important division. For purposes of clarification, let us subdivide this group into the divisions into which they naturally and spontaneously fall; namely, Fractures in the Region of the Internal Condyle of the Humerus, Fractures in the Region of the External Condyle of the Humerus, and Fractures Involving Both Condyles of the Humerus. I consider it wholly unnecessary to make an accurate division between fractures involving the condyle, and those of the epicondyle, since the same treatment is indicated for either, the difference being largely one of technique, rather than one of principle.

Let us consider first, fractures of the internal condyle, or epicondyle. It makes, in my opinion, very little difference whether or not the fracture extends into the joint surface, from the standpoint of therapy. In any event, if the internal epicondyle is separated, or if the internal condyle is fractured, it is absolutely essential to get an accurate reposition, such as can be obtained only by open operation. While in the occasional isolated case it may be possible to secure a perfect reduction by closed manipulation and so, obtain an excellent result, the percentage of cases so treated successfully is so small that I do not feel that we are justified in adopting it as a method of choice. Since, in children, the actual bone revealed in x-ray is so much less than the entirety of the condyle, it is in many cases well nigh impossible to



Figure 1: Fracture Internal Condyle with complete rotation and internal fixation, showing result after three years, with no growth disturbance.

determine accurately from the x-ray picture the exact position of the fragment which has been broken loose. I am sure that we have all had the experience, in operating cases of this type, of finding the fragment rotated through ninety or one-hundred and eighty degrees, while a rather careful study of the preliminary x-ray will indicate only a certain amount of medial or downward displacement. In many cases, the fragment represented on the x-ray as a small island of osseous tissue, may on exploration develop into a large portion of the epicondylar area of the humerus. The heavy muscular at-

*Read in General Clinical Session, Southern Medical Association, Thirty-Second Annual Meeting, Oklahoma City, Oklahoma, November 15-18, 1938.

tachments of the flexor-pronator group of muscles of the forearm, tend almost inevitably not only to displace the fragment downward, but to rotate it on its axis, in such a manner as to make accurate closed reposition an impossibility. Even if reposition can be obtained, the continued tonus of the muscles involved will almost inevitably pull the fragment into malposition. While in an adult, this malposition can be analyzed, and so the amount of disability evaluated, in children, it is impossible to determine just what will be the effect of gross disturbance in this area of bone development.

It is, therefore, my firm conviction that the treatment of choice, in this type of fracture, even with *slight* separation, is an open operation, with an accurate reposition of the fragment, followed by definite solid fixation. It is my own choice to use transfixion with a nail of suitable size, as illustrated by the accompanying slides. (Fig. 1) I seek no dispute, however, as to the exact method or technique for fixation, provided that reposition is secured under the eye, and fixation maintained in a satisfactory and efficient manner. It is my opinion that the fixation should be removed, within a suitable period



Figure 4: A case very similar to figures 2, and 3, which had inadequate reduction and fixation, showing result after 2 years, with gross and increasing deformity.

of time, from three to six weeks, in order to eliminate as far as possible any reaction from the effect of a foreign body. Operation should be carried out, as soon as proper indications will permit. With an early, adequate fixation, prompt motion can be instituted, in order to prevent the disabling effect of contracture. I plan to have all *external* fixation removed by the end of three weeks, and two weeks, preferably. This can be permitted by adequate *internal* fixation of the loose fragment.

In the second group of cases, namely, fractures of the external condyle, or epicondylar area, very much the same indications are present as in those in the region of the inner side of the elbow, with the notable addition, that the large capitellar area may be represented by a large mass of cartilage with only a small center of bone. We are particularly prone to misinterpret this from an x-ray standpoint. Here, again, it is extremely important, not only to preserve the normal anatomical relationship of the elbow joint, but also to prevent a very disagreeable and disabling deformity, which is so common following fractures disturbing the normal epiphyseal relationship between the capitellum and the humerus. (See Fig. 4) It must not suffice to get an approximate reduction, and to attempt to hold it by a molded plaster splint, or by supination and



Figure 2: Fracture of the external condyle before reduction, showing gross displacement.

flexion of the forearm. In the majority of cases, such a remedy will be inadequate, and the treatment of choice in this group also must be adequate internal fixation. There has been a

good deal of discussion as to whether or not transfixion of the capitellar epiphysis by a nail has any effect. In my opinion, transfixion which is properly inserted and removed within the period of less than six weeks, will have little or no effect upon the developing epiphyseal plate. We well know from our experience with epiphyseal arrest in other areas, that a simple puncture wound through the epiphyses, not complicated by infection, has no effect on the remainder of the epiphyseal plate. However, if the fragment is sufficiently large, some effort may be made to avoid the epiphyseal line. (See Fig. 2-3) In this area, it has long been the



Figure 3: Same as figure 2, after internal fixation, showing perfect position.

precedent to use fixation by cat gut through corresponding drill holes. In my opinion, this is, as a rule, inadequate, and is a more complicated and more difficult technical procedure than simple transfixion with a nail of suitable size. Here again, however, there need be no serious debate as to the method of internal fixation, provided that reposition is accurate, and fixation secure enough to permit early mobilization.

In the third group of cases, that is, fractures entirely across the condyles of the humerus, with a fracture through the condyles, or simple transverse fracture, it is my opinion that since we here have a larger block of bone, with normal relationship preserved between the two condyles, it is not so essential to get accurate reposition, and not as difficult to maintain proper fixation. (See Fig. 6) However, in a certain percentage of cases,



Figure 6: Ordinary supracondylar fracture with closed reduction, not requiring internal fixation.

particularly of the T type, it is indispensable to employ open operation with reposition and internal fixation. In this group of cases, the rule is closed reduction, with the exception open operation and fixation. However, while in the former two groups, it is my personal opinion that there are practically no exceptions to the rule of open operation, in the latter group, there is a very definite percentage of cases which demand operative interference. I shall not attempt to go into the vast subject of dicondylar, or supracondylar fractures at this time, other than to mention that certain of these cases also require internal fixation. (Fig. 5)

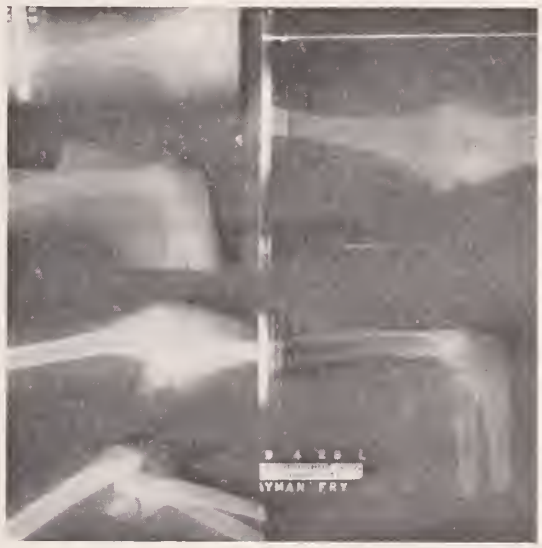


Figure 5: T fracture of both condyles, requiring internal fixation and condition 3 months later, showing excellent contour with good function.

In conclusion, therefore, let me reiterate that in fractures of the inner or outer condylar areas of the lower end of the humerus, there is, in my opinion, a very definite treatment of choice, namely, open operation and

internal fixation. The possible complications of operative infection, damage to vital nerves, or blood supply, are largely obviated by a careful technique, and present nowhere near the potentiality for deformity and disability that is offered by the complications of attempted closed reduction and fixation, namely, disturbance of growth with cubitus varus, or valgus; irregularity of the joint surface, with resulting limitation of motion and traumatic arthritis; and thirdly, malunion with necessity for osteoplastic procedures after healing is complete. With proper consideration of general and local conditions, the earlier the operation is performed, the better. It is futile to wait for swelling to subside, or for the hematoma to be absorbed. Contra-indications; such as, general condition of the patient, contaminated skin abrasions, etc., must, of course, take their proper place in the consideration of the time for operation. These indications are the same here as in any major bone surgery.

I have here attempted to delineate no new or startling methods of treatment, but to emphasize the importance of accurately analyzing the situation in fractures of the elbow, with the idea of resorting to open operation in certain, selected cases where the penalties for non-operation are much more severe than the dangers of surgery. While in the majority of fractures, conservative, closed manipulation and external fixation is without question the treatment of choice, this will not suffice in the type of cases here presented.

Primary Glaucoma*

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Hippocrates, in his "Aphorisms," pointed out that among the well known diseases of the eye is one glaucosis, which is marked by a sea-colored pupil; Glaucosis coming from the Greek meaning green. He further states that the eye having attained this color is blind, and amaurosis frequently follows in the other eye. Antecedent to his description we find reference in the Old Testament of Eli, Isaac and others being[1] blind apparently of glaucoma. It is interesting to note that they are Semetic and a predisposition seems to exist in this race.

Skipping hastily over the history we find that La Grange who is best known for his surgical devices for the relief of hypertension, struck the right chord when he stated: "The eye attacked by hypertension is a sick eye in a sick body and is not merely a hypotonic organ but also a sclerosed, dystrophic organ that shows the trouble with the rest of the body."

It seems to me that to gain a useful knowledge of the subject a working classification must be arrived at for your own use. We have all been taught that there is a primary with congestive, acute and chronic, and non-congestive usually called simple, and secondary glaucoma.

The[2] designation of acute inflammatory glaucoma as acute, incompensated glaucoma, as proposed by Elsching, has been steadily gaining favor. Apparently 75 per cent of the cases are hyperopia, the remaining 25 per cent being about evenly divided between myopia and emmetropia.

The exact cause of acute, incompensated glaucoma has not been satisfactorily determined. There are certain factors such as anatomic predisposition and disturbance in the normal pressure regulatory mechanism which are intimately associated with the production of hypertension in the previously normal eye.

In hyperopia the eye is smaller and the anterior chamber definitely shallower, with the result that the anterior surface of the iris lies closer to the posterior surface of the cornea. Thus the angular acuity of the anterior chamber angle is increased and the size of the outlet is decreased. It is here that incompensated glaucoma occurs most frequently.

This is spoken of by Barkan[4] as the Shallow Anterior Chamber type, and from his gonioscopic studies is due to blocking of filtration by the root of the iris lying in apposition to the wall of the angle. He places all cases of glaucoma with shallow anterior chamber in this classification, which includes chronic simple or non-congestive or compensated cases.

Under normal conditions the intra-ocular pressure is maintained by the variation in the size of the choroidal vessels and to a lesser extent by those in the ciliary body. Any condition such as an emotional disturbance might cause a sudden increase in vessel size in the vitreous, which transmits the increase in pressure to the lens and then joins the

*Read before the Section on Eye, Ear, Nose and Throat, annual meeting, Oklahoma State Medical Association, May 3, 1939, Oklahoma City.

angle against the iris and the outlet is blocked.

Another stimulus comes before this has relaxed and the cycle is started, leading to an acute incompensated glaucoma.

Here we have: (1) internal pain, (2) moderate edema of the eyelids with lacrimation, (3) intense congestion of the bulbar conjunctiva and scleral vessels, (4) steamy cornea, (5) shallow anterior chamber, (6) pupil moderately dilated, slightly irregular and rigid, (7) cloudy appearance of iris, (8) marked loss of fundus reflex, (9) loss of a great amount of vision, (10) hyperemia of the disc if you can see it, (11) increased intra-ocular pressure, (12) and various systemic symptoms including nausea, vomiting, chills, and many others.

Here the histologic picture is one of hyperemia and edema of all structures of the eye. Vacualization between epithelial cells and Bowman's membrane is a constant finding, and will become permanent unless the attack is successfully terminated immediately. The stroma of the iris is hyperemic and in the sphincter the individual muscle cells are swollen, others degenerated, and still others are represented only by cellular detritus. This is not uniform but occurs at intervals throughout the sphincter. There are no changes in the sclera except hyperemia of the scleral vessels.

Still following Elsching, we have chronic incompensated glaucoma, having a position midway between acute incompensated glaucoma and simple compensated glaucoma, both clinically and from a standpoint of prognosis.

The picture seen is one of reduced severity. The edema is very mild, if present, and the pain is less severe. Steamy cornea is present only during undue rise of tension. There are degenerative appearances in the cornea, such as irregular opacities and bulbous keratitis.

The treatment is, essentially, eserin in .5 to 1 per cent solution every three to six hours. Pilocarpine 1 per cent or 2 per cent may intensify the action of the former drug. Systemic treatment and epinephrine subconjunctivally is seldom of avail. Here simple iridectomy is not the panacea that it is in the acute form, for it is efficacious in less than half the cases. Here a filtering operation must be used; an Elliott trephine, La-Grange iridosclerectomy, or iridencleisis may be undertaken before too great a time has elapsed. Recovery of normal vision is not attained due to the great damage done prior to the knowledge that something was wrong with the eye.

According to Reese, about 60 per cent of the cases operated are improved, 30 per cent not influenced, and 10 per cent are made worse. This, by the application of the suitable operation to the type of glaucomatous case presenting itself for operation, an accurate diagnosis being the first and most essential factor for a successful outcome.

Absolute glaucoma is the outcome of primary glaucoma which has failed to respond to treatment or has gone untreated. The anterior chamber is shallow and there are usually anterior adhensions between the anterior surface of the iris and posterior surface of the cornea, usually involving the peripheral one-third of the iris.

Here medicinal treatment is of no avail and, if painful, enucleation is the procedure of choice.

Chronic simple glaucoma, chronic non-inflammatory or compensated glaucoma are terms delineating the same clinical entity. It is the most common malignant condition that confronts the ophthalmologist. In metropolitan areas it makes up about 3 per cent of all pathological eye conditions. It may occur at any time from puberty on, with the lower usual age being 30 to 35 years.

It might be well just to mention some of the etiological theories on compensated glaucoma; (1) Edema theory, or volumetric increase of intra-ocular tissues, (2) increase in the production of aqueous, or hypersecretion thoery, (3) retention or obstruction to outflow of intra-ocular fluids, and decrease in elasticity as a cause of hypertension.

The picture seen in a typical case of compensated glaucoma should show some or all of the following signs in some degree, depending on the length and severity of the case at hand:

(1) Bilaterality, (2) no inflammation, (3) normal conjunctiva and cornea, (4) normal sclera, (5) shallowing of anterior chamber, (6) free pigment granules in anterior chamber, on anterior surface of iris, and posterior surface of cornea, (7) adhensions in the anterior chamber angle, (8) gradual dilatation and rigidity of the pupil, (9) atrophy of the iris stroma with new vessel formation on the surface, (10) diffuse irregular lens opacities, (11) normal vitreous, (12) excavation of the optic nerve head, (13) circumpapillary atrophy, (14) obliteration of some retinal vessels, (15) early morning rise in tension, (16) decreased vision, (17) visual form and color fields partly destroyed; (18) formation of scotomata, (19) changes in refraction, (20) disturbance of dark adaptation.

The treatment of compensated glaucoma resolves itself into either medical or surgical. The medical should always be attempted in order to see the reaction of the eye and also to gain some knowledge as to the type of surgery that eventually may have to be used. The weakest solution of pilocarpine

that will suffice to keep the tension below damaging point should be used. But even in the most ideal case changes in visual acuity, fields and tension may be noted and the subject of surgery is brought up.

According to Gradle[3] and Reese[4], cyclodialysis is the procedure of choice, when miotics are just failing to keep the eye under control. After an attempted cyclodialysis if there is an increase in tension within three to four weeks a filtration operation is essential. On the other hand, if the recurrence takes three or four months the procedure may be repeated with more chance of success. This is not a cure, as miotics must be continued to make success permanent.

The filtration operations maintain normal tension more satisfactorily, but are more dangerous. First, because of the loss of central visual field and then the ever present possibility of infection.

In closing, let me state the types of secondary glaucoma: (1) due to disease of the iris, (2) change in position of lens, (3) intra-ocular neoplasm, (4) disease of ciliary body and choriod, (5) disease of cornea, (6) non-perforating injury of the eye, (7) retinal disease, (8) congenital anomalies, (9) stasis of orbital veins.

In this classification a trephine operation using a 2 m.m. trephine[5], remembering that iritis occurs in about 15 per cent of the cases and complications are frequent.

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Nasal Plastic Operations*

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In preparation of this paper to give some of the main indications for and methods of doing plastic operations on the nose, I was somewhat surprised to learn that these operations were not of recent origin but were practiced among the Hindoos several thousand years go. In India, at that time, apparently, a rather common penalty for minor crimes was the loss of the nose and restorative procedures were much in demand. Their methods were quite well advanced and remarkable results were obtained by the use of pedunculated flaps. More recent and more reliable writings of Celsus, about the time of the advent of the Christian era, show his steps in shifting living tissues on the face and reports of fair results. In the second century, Galen left a good account of the technique used in restoring lost portions of the lips and nostrils.

The next period of medical history belongs to the Arabians but they offer no improvements and like all the arts of the dark ages, plastic surgery received little work until the sixteenth century when the Italian school devised numerous operations which were quite ingenious but quite painful. The modern era of plastic surgery had its beginning with a revival, in 1814, of the Indian method of nasal reconstruction by use of pedunculated flaps. These operations were used quite frequently in United States and Europe after that time, but progress was slow and the results were probably little better than those obtained by the originators of the method. The greatest improvement in technic came with the World War which brought still greater disfigurements and opportunities for practice on a vast number of cases. Since the war, however, there has been little change in the methods used and only minor improvements in technic. During the last decade there has been a rebirth of interest in plastic surgery, resulting, perhaps, from the increased number of highway accidents that rival the great war in furnishing opportunities for reconstructive work.

Located centrally and prominently on the face, it is no wonder that nasal plastic operations have led other branches of plastic surgery. The nose is very susceptible to injury and when deformed externally, the deformity cannot be hidden with any degree of success so that the patient turns sooner or later to surgery for correction. The nose plays an important part in the formation of first impressions and a gross deformity may make a very commendable character appear quite repellant. Minor defects are also important in that they are subject to observation and ridicule which is sure to exert a deep influence on the temperament and disposition of the bearer. This is especially true of young girls whose course in life is, in a large measure, determined by physical attractiveness. The same is true, in a lesser degree, with boys where nasal defects may

*Read before the Section on Eye, Ear, Nose and Throat, Annual Meeting, Oklahoma State Medical Association, May 3, 1939, Oklahoma City.

be a predominating factor in the cause of introversion. The economic side of nasal deformities should also be considered since many positions are influenced by personal appearance. In this matter, the role of racial characteristics is well known.

Heredity is responsible for the size of the nose and also for the shape unless outside influences play their part. By outside influences, I mean trauma which is responsible for most of the nasal deformities. Inadequate medical care at the time of the trauma is probably the reason for much of the later plastic surgery that is done today. Early replacement of the displaced bones and cartilages is comparatively easy when compared with the difficulties encountered in late repair. This is especially true in case of chilren where small displacements may result in marked deviations through the process of growth in the wrong plane. For this reason it has been suggested that, in all cases of suspected fracture in children, pressure be applied from the inside of the nose to elevate any depressed fragments. In general, a fracture of the nose may be fairly easily reset at any time within two weeks of the original displacement. Since the union is not firm within this time, the fragments may be mobilized by external force without undermining the skin over the dorsum of the nose and the displacement corrected by the proper pressure. For this, a general anesthetic is necessary and the nose should be packed for forty-eight hours to furnish internal support and elevation of the nasal bones, while an external splint should be worn for at least a week to maintain the shape of the nose and offer protection during early reunion of the mobilized bones.

In correcting the shape of old deformities, whether due to trauma or heredity, there are certain steps that should be completed before the actual operation. The first of these is elimination of infection since this may entirely undo all the work accomplished by the operation. All infections of the upper respiratory tract should be completely controlled and the operation deferred for any acute infection. Chronic sinusitis or rhinitis should be eliminated as well as possible before operation. The patient tends to magnify the importance of small deformities while the average doctor will have a tendency to make their importance seem trivial. To accurately show their extent and determine the importance of these deformities, nothing suits the purpose so well as a cast of the nose and surrounding tissues made either of plaster or negacol. This cast is also very useful in determining the type of operation and the amount of correction to be made as well as in preparation of the splint for after use. Photographs showing the lateral and front views of the face are important for permanent records and are of much importance in case of later legal actions.

The purpose of the operation is to restore the nose to normal in size and shape. In this matter it is well to remember that the length of the nose is half the distance from the eyebrows to the tip of the chin and that the nose, normally, should make an agle with the plane of the face, as measured from the forehead to the chin, of approximately 30 degrees since a nose with a greater angle appears protruding and, if the angle is much less, it appears flat. The operation itself can very well be done under local anesthesia except in younger individuals and emotional adults since it has the added advantage of less bleeding at the time of the operation. In case there is also need for submucous resection—and in most cases there is—this is best done at the time of the plastic instead of being a preliminary operation since this eliminates one operation and saves the patient from the added discomfort and expense which might not be tolerated in many cases. It also allows for a more complete operation and tends to make the surgeon more conservative in leaving septal material for support if done at the time of the plastic repair. After obtaining good anesthesia, the skin and periosteum of the nose are elevated through lateral incisions made inside the vestiblue between the greater alar and lateral nasal cartilages. Now bony humps may be removed with the rasp or saw and the deformity over corrected in these cases. Bone and cartilage implants may be inserted to give the necessary angle while lateral deviations may be corrected by mobilization of the nasal bones at their junction with the maxillary and frontal bones. Shortening of the nose is accomplished by removal of a section from the septum. Sutures are used only in the septal incisions while the lateral incisions are left open for free drainage. The nose is then closely packed if a submucous resection has been done or loosely if this part of the operation has not been necessary. External splints are firmly applied to prevent undue swelling and protect the nose.

Postoperative care resolves itself chiefly into symptomatic treatment and watching for complications which are, fortunately, quite rare. After 48 hours the packing in the nose is removed and replaced with looser packing to absorb the secretions. These are left in place for several more days. The splint is worn about two weeks. Ice compresses aid in reducing the edema. In case of infection, free drainage is indicated and hot compresses aid in releiving the pain.

In closing, I wish to recall that deformi-

ties of the nose are more easily corrected early than late. Also the psychological effect will be better if the deformities are not left until late in life. The plastic operation, itself is, however, often very simple and one commonly finds that the most difficult stage of the operation is the submucous resection. It is well to remember that every individual has the right to look like a human and although we may not be able to entirely satisfy the patient, the results are, as a rule, quite satisfactory.

Lymphopathia Venerea*

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For the sake of clarification let me emphasize that lymphopathia venerea and granuloma inguinale are two distinct and different diseases. Granuloma inguinale is the so-called fourth venereal disease. Its main characteristic is that it forms a granulating ulcer usually in the groin or on the external genitalia. The ulcer is chronic and does not respond to local treatment. The diagnosis is made by the finding of Donovan bodies and its response to tartar-emetic or Faudin therapy. Lymphopathia venerea is a disease which is caused by a filtrable virus. It goes by many many different names. Among them are: tropical bubo, climatic bubo, elephantiasis vulvae, pseudo elephantiasis of the penis and scrotum, lupus vulvae, strumous bubo, nonspecific bubo, genito-ano-rectal syndrome. The French call it the disease of Nicolas-Favre. The earliest record of the condition goes back to 1848 when a man named Hugier described it and gave it the name esthiomene. It was described also in 1875 by Fournier as ano-rectal syphilis, and also known as Fournier's syndrome. Frei and Kopell demonstrated the positive Frei test in 1925. After the establishing of the Frei test there was rapid progress made in connecting the ano-rectal condition with lymphopathia venerea. Medical literature in the past few years has contained numerous reports of lymphopathia venerea. The statistics all bear out the fact that there is a direct connection between stricture of the rectum (as commonly found) and lymphopathia venerea.

For the benefit of those who might not come in frequent contact with this condition I will give a brief review of the clinical course of lymphopathia venerea.

Its first manifestation is in the primary lesion which is usually a small shallow non-indurated ulcer which appears from 2 to 5 days following sexual exposure. Its site on the male is most commonly in the region of the coronary sulcus. In the female its most common location is thought to be in the region of the posterior fornix, of course, we can be reasonably sure that it can occur in any portion of the external genitalia. This ulcer is usually of short duration. The primary lesion appears from 2 to 20 days after sexual contact and lasts only a short while, five days at the most. It never becomes a large ulcer nor a chronic one. Following the appearance of this primary ulcer in the male there is an induration of the inyuinal lymph nodes usually unilateral but may be bilateral. This comes on in bout 2 to 3 weeks following the disappearance of the primary lesion, and the prodromal symptoms are chills and other toxic manifestions. The patient expresses himself as feeling tough, and sometimes has to quit working and go to bed. The inguinal nodes become indurated, matted together, firm, enlarged, and somewhat tender. The skin becomes shiny over them and takes on a cyanotic tint. The glands enlarge in size slowly. No area of fluctuation is felt for days and perhaps even weeks. It is at this stage when a diagnosis is of great importance to your patient. When a patient presents himself with an inguinal adenitis and you cannot find any pathology of the external genitalia to account for it you should think of one of the fungus infections of the feet or some other infection of the lower extremity upon the side effected which would cause inguinal adenitis.

Many perhaps will not give a history of having had a primary lesion. Some of them will say that they noticed an ulcer and reported to a physician, but he told them that it was just a case of herpes and not to think

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anything of it. A tubercular lymphadenitis of the inguinal region may be differentiated from lympho-granulomatous lymphadenitis by using the Frei antigen and making a careful search for tuberculosis elsewhere in the body. Inguinal adenitis due to chancroids, gonococcal urethritis, and pyogenic prostatitis should be easily ruled out. Inguinal adenitis due to syphilis almost never suppurates. In the female the primary lesion has been observed on very few occasions this is perhaps due to its possibly occurring in the vagina or on the cervix. The inguinal lesion associated with chancroid infection progresses rapidly to suppuration while in lymphopathia venerea the suppuration is late and the areas of suppuration are multiple. In chancroidal infection the penile lesion is usually still present, while in lymphopathia venerea the penile lesion has disappeared. Let us not lose sight of the fact, however, that a darkfield should be run on every ulcer of the external genitalia. The physical appearance of the penile ulcer to the naked eye is very likely to mislead the best of trained men. In the female, the second stage may be manifest by an inguinal adenitis the same as in a male although the primary lesion be in the vagina, and the differential diagnosis will be along the same lines as in the male. In either sex, abdominal tenderness may or may not be present depending upon how much toxin or virus has reached the hypogastric and other deep lymph nodes.

The prevalence of this disease is universal. Reports concerning it are found in medical literature the world over, and I feel certain that there are many, many cases being overlooked in our own community every year. One should look with great suspicion upon any penile lesion commonly found along the coronary sulcus or prepuce with a negative dark field. I feel that I myself have been rather lax and have dismissed cases as herpes progenitalia which perhaps were lymphopathia venerea. The primary lesion is usually single, but may be multiple and does occur in extra genital locations. It is highly possible that some cases of non-specific urethritis are caused by a deep seated intraurethral primary lesion. Following the primary lesion there is evidence of the virus becoming disseminated throughout the whole system.

One worker has reported its presence in the spinal fluid during the secondary stage of the disease. Toxic skin eruptions and arthralgias may accompany the secondary stage. There is also an early involvement of the spleen in almost every case. Some of these patients are treated symptomatically for fever of an undetermined origin. The fever hardly ever goes very high, usually from 100 to 102½. As the adenitis becomes fairly well developed the systemic manifestations becomes less and less. The discoloration of the skin over the inguinal adenitis is considered by some men as very important in making a diagnosis of lymphopathia venerea. A few weeks after the adenitis begins there may be several areas which become fluctuant and unless drained they will rupture spontaneously.

The discharge is thick grayish yellow and is without odor. Whether the fluctuant areas are drained by incision or needle puncture or undergo spontaneous rupture, fistulae and sinuses form and persist usually for months draining a thin purulent material. Communicative channels usually form to connect the suppurating areas. The condition is self limited in the groin. It tends to become chronic and drains over long periods of time, and the amount of destruction in the groin depends upon the virulunce of the infection and the resisting powers of the host. Clyne reports that in 169 cases of chancroidal infection there was only one positive Frei test. This one man who had a positive Frei test, gave a history of having previously had an inguinal-adenopathy. He also had forty-four cases of positive dark field all of which gave a negative Frei test. It might be well to mention here also that many workers report false positive Wassermann tests in cases of lymphopathia venerea, and that some workers report that when syphilis and lymphopathia venerea co-exist that the Frei test remains negative so long as the Wassermann test remains positive. Although this seems to cast a haze over the relationship of the two diseases, in general it does help to clear up some of our past indiscrepancies.

Many cases of lymphopathia venerea cause strictures in the rectum; this is especially true in the female, due to the differences of the lymphatic drainage of the two sexes. The disease seems to run its course in the lymphatics of the groin in the male. There is no definite way of determining what the clinical course is going to be when lymphopathia venerea reaches a chronic stage; secondary infection usually wrecks havoc. Many of the abscesses, however, which are found are sterile on culture. The usual clinical course in lymphopathia venerea is that if the lymph nodes of the inguinal area are markedly involved, then the peri-rectal area of lymph nodes is spared. When an abscessed lymph node is encountered it should be aspirated using aseptic technic and the aspirated fluid carefully preserved. If a Frei test has been run and found to be positive on such a patient, then the aspirated fluid may be used to make up the antigen. This is done by diluting the as-

pirated fluid one to five with sterile saline and sterilizing just as one would sterilize a vaccine, on two successive days. The Frei test is performed by using 1/10 of a cc. of the diluted antigen intradermally and reading the test in 72 hours. A positive test should be an elavated papule 7 mm in diameter. In any suspected case of lymphopathia venerea we may expect a positive Frei test at the end of the second week following the appearance of the primary lesion. When a negative Frei test is present and the patient has a bubo and a primary lesion with a negactive dark field it is well to run a test using Ducrey vaccine.

In using the mouse antigen, one should always use a control and never consider the test positive even with a papule if no control has been run. One of the main characteristics of this disease is lymphadenitis. Lymphadenitis of the areas involved and elephantiasis of the genitalia is one of the diagnostic signs of the diseases. One of the most important factors in the treatment of lymphopathia venerea is the early recognition of the disease before diffuse lymphatic involvement has occurred. One can begin the treatment with Frei antigen using 1/10 of a cc. intradermally and gradually increasing the dosage depending on the patient's tolerance, finally resorting to intravenous injections of the antigen. 1 cc., once or twice per week, should be about the maximum dose of the antigen. When suppuration of the lymph nodes of the groin occurs, it is possibly the best procedure to first aspirate them and next to incise them freely. Some men in the past have exercised the whole inguinal group of nodes which to me seems to be the wrong thing to do, because, in the first place, all the nodes may not be involved and in the second place there is a tendency for them to become functioning nodes again. Personally, I do not feel that excision of the nodes has anything in its favor.

As a general rule a patient who is suffering from a chronic infection of the virus of lymphopathia venerea is anemic and should have liberal dosage of the iron compounds supplemented with vitamins B, C, and D. The hematopoietic system begins to show evidence of damage early in the disease. Rectal involvement in the form of stricture of the rectum with diffuse peri-rectal inflammation represents an advanced stage of the disease and is best treated by giving Frei antigen as outlined above, sulfanilamide, tonics as outlined and a posterior proctotomy.

I am firmly convinced that lymphopathia venerea is much more common in this state than we have been led to believe. It is a condition which can be recognized early if seen early and my one big plea is that in an inguinal adenopathy, in a fever of undetermined origin, or in polyarthritis of unknown etiology, or peri-proctitis with or without stricture of the rectum, run a Frei test.

Use of Antiseptic Anaesthetic Agent Locally In Extensive Burn

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INTRODUCTORY

Management of a major burn with an anesthetic bacteriostatic topical dressing is reported. Advantages in this form of therapy are pointed out. Illustrations of the degree and character of healing are shown.

CASE HISTORY

This fifty-five year old Czech farmer was burned on May 28, 1939, when gasoline that he was handling was ignited by tractor. The gasoline was slopped over the left pant leg. This leg was severely burned and both hands were burned in the patient's effort to put out the fire.

He was seen in the St. Anthony Hospital, Oklahoma City, the fourth day after he was burned at which time the examination revealed second and third degree burns of the entire circumference of the left leg from his ankle to mid thigh, blistering burns of the right hand and blistering and full thickness "cooking" burns of the left palm and wrist. The burned area had been treated by various agents at the outset and the most recent thing employed was tincture of merthiolate. This had been painted on over the cooked skin and the denuded area. The areas of full thickness destruction were beginning



Fig. 1.—Note extent of annular burn from ankle to mid-thigh, healed except for several small granulating areas which are centered by "pinch" grafts.

to devitalize and pus was apparent. It was the onset of the stage of infection.

All manipulations and dressing of the burn were painful and bitterly complained of by the patient. In fact, adequate dressing of the leg was impossible in the face of his refusal to tolerate the pain. The usual routine of saline dressings reapplied every four hours was abandoned and annular gauze dressings saturated in Foille and changed every four hours were instituted. The immediate response of the patient was gratifying. The anxiety and hostility previously



Fig. 2.—Note living and growing "pinch" grafts on healthy granulation tissue.

mobilized by the painful dressings disappeared. Confidence of the patient was immediately regained.

With each dressing, some of the free debris of the burn came away until nothing remained that required removal except the devitalized but securely fixed skin which was gradually removed a little at a time at each dressing with sharp scissors and forceps. At the time this anesthetic, bacteriostatic vegetable oil emulsion was first applied, the infection was beginning. Arrest of this phase was observed in twenty-four hours. There was never an elevation of temperature.

The effect of this preparation upon the healing of the burned site, whether first, second, or third degree is most salutary. Only those areas in which the skin was cooked and necessarily devitalized in its full thickness and necessarily sloughed away, only here did granulation occur. Patient was discharged August 8, 1939.

It has been our observation in the last ten years that a major requirement in the initial management of second degree burns was to preserve that portion of the derma which was originally not devitalized from subsequent destruction by infection. This modality accomplishes this. It is well to mention that epithelialization progresses at a normal rate and the take and growth of skin grafts is not unfavorably influenced by this preparation. This preparation a vegetable water-in-oil emulsion, contains:

	Per Cent
Potassium Iodide	0.14
Calcium Iodide	0.25
Calcium Thiosulfate	0.02
Calcium Soap	0.39
Oxyquinoline Base	0.20
Ethyl Aclohol by volume	1.4
Phenol	2.8
Benzocaine	1.3
Vegetable oil vehicle	90.114

CONCLUSIONS

The treatment of a single case of Hyperthermic Epidermal Devitalization and full

thickness ("cooking") dermal destruction with an oil-emulsion anesthetic, bacteriostatic, topical agent is reported. It is pointed out that certain benefits are observable and it is believed that these constitute an advance in the treatment of major burns.

SUMMARY

In summary, these benefits are:

(1) It permits painless dressings.
(2) It eliminates the stage of infection.
(3) It does not unfavorably influence the growth of epithelium or skin grafts.

$2,500,000 Abbott Gift to Universities

Gifts of approximately $1,500,000 to Northwestern University and of approximately $1,000,000 to the University of Chicago are announced by the Trustees of the estate of Clara A. Abbott, who died in 1924, and whose will made unusually generous provision for charity. The Estate is now finally closed.

Both gifts will be used for medical and chemical research. The gift to the University of Chicago will operate to secure for that institution an additional $1,500,000 from the Rockefeller Foundation to be used for Biological Research which was promised conditionally upon the University securing an additional amount now realized by the Abbott Estate gift.

Clara A. Abbott was the widow of Dr. Wallace C. Abbott, founder of Abbott Laboratories. The latter was a practicing physician in Chicago for many years and began the manufacture of chemicals and pharmaceuticals in Ravenswood, Ill., in 1888. He died in 1921.

Other gifts also announced by the Trustees include the following approximate amounts to the following institutions: Victory Memorial Hospital, Waukegan, Ill., $250,000; Evanston Hospital, Evanston, Ill., $250,000; and Knox College, Galesburg, Ill., $250,000.

"Stone Walls Do Not a Prison Make Nor Iron Bars a Cage"

Winter is a jailer who shuts us all in from the fullest vitamin D value of sunlight. The baby becomes virtually a prisoner, in several senses: First of all, meteorologic observations prove that winter sunshine in most sections of the country averages 10 to 50 per cent less than summer sunshine. Secondly, the quality of the available sunshine is inferior due to the shorter distance of the sun from the earth altering the angle of the sun's rays. Again, the hour of the day has an important bearing: At 8:30 A. M. there is an average loss of over 31%, and at 3:30 P. M., over 21%.

Furthermore, at this season, the mother is likely to bundle her baby to keep it warm, shutting out the sun from Baby's skin; and in turning the carriage away from the wind, she may also turn the child's face away from the sun.

Moreover, as Dr. Alfred F. Hess has pointed out, "it has never been determined whether the skin of individuals varies in its content of ergosterol" (synthesized by the sun's rays into vitamin D) "or, again, whether this factor is equally distributed throughout the surface of the body."

While neither Mead's Oleum Percomorphum nor Mead's Cod Liver Oil Fortified With Percomorph Liver Oil constitutes a substitute for sunshine, they do offer an effective controllable supplement especially important because the only natural foodstuff that contains appreciable quantities of vitamin D is egg-yolk. Unlike winter sunshine, the vitamin D value of Mead's antirickets products does not vary from day to day or from hour to hour.

Dr. E. D. Greenberger was elected chief of staff of the Albert Pike Hospital in McAlester at a recent meeting. Dr. R. K. Pemberton was named vice chief and Dr. W. H. Kaeiser secretary.

International College of Surgeons to Convene

The United States Chapter of the International College of Surgeons will hold its fourth annual Assembly February 11-14, 1940, in Venice, Florida. In addition to prominent American speakers, professors of surgery from Brazil, Canada, Cuba, Mexico, and Turkey will lecture. Scientific and technical exhibits will be displayed in the patio of the Florida Medical Center. A well-rounded social program has been planned for the visiting surgeons, their wives, and guests.

For any information, including the presentation of scientific papers or exhibits, please address Dr. Charles H. Arnold, Secretary to the Scientific Assembly, Terminal Building, Lincoln, Nebraska.

Among the speakers are Dr. Temple Fay, Professor of Neurosurgery of Temple University, Philadelphia, who will describe the results of his new refrigeration treatment for malignancy which has aroused world-wide interest; Dr. Bradley Patten, Director of the Department of Anatomy, University of Michigan, who will show motion pictures and electrocardiographs of the first heart beats and the beginning of the circulation in living embryos; and Drs. Paul T. Butler and Eugene Maier of Florida who will describe recent advances in therapy by the use of snake venoms.

Some other speakers and their topics include:

Dr. Moses Behrend of Philadelphia: The Role of Extrapleural Pneumothorax in the Treatment of Pulmonary Tuberculosis.

Dr. William Carson of Milwaukee: Retroperitoneal Tumors.

Dr. Warren Davis, Clinical Professor of Oral Surgery, Jefferson Medical College, Philadelphia: Methods Preferred in Cleft Lip and Cleft Palate Repair.

Dr. Otto DeMuth of Vancouver, B. C.: Recent Developments in Biliary Surgery.

Dr. Alberto Inclan, Professor of Orthopedic Surgery, Havana, Cuba: Surgical Treatment of Giant-Cell Tumors of Bones.

Dr. William Lower, Director of Cleveland Clinic Foundation, Cleveland, Ohio: The Indications for and the Results of Ureteral Transplantation into the Recto-Sigmoid.

Professor Rudolph Nissen of Instanbul, Turkey: Reconstruction of the Ureter.

Dr. Lewis Smead of Toledo, Ohio: Management of Acute Hemorrhagic Pancreatitis.

Dr. Carl Steinke of Akron, Ohio: Treatment of Complications of Penetrating Wounds of the Thorax and Associated Injuries.

On the program, but their subject not announced as yet are: Dr. Oswaldo P. Campos of Rio De Janeiro, Brazil; Dr. M. Lopez Espinrizzar and Professor Manuel Manzanilla, both of Mexico City; Dr. Grover C. Weil, Assistant Professor of Surgery at the University of Pittsburgh; and Dr. Thomas Wheeldon of Richmond, Virginia.

Washington Birthday Clinics Scheduled

For the second year, Oklahoma City will have its Washington Birthday Medical Clinics. Scheduled for February 22 at University Hospital, the clinics will be held only during the one day.

The clinics will be devoted to "Internal Medicine", under the sponsorship of the Oklahoma City Internists' Association. Dr. F. Redding Hood is secretary. The sessions, open to doctors, will begin at 10 a. m.

A Lifetime Position for Dr. Callaway

When the Garvin County Medical Society met for its annual election session, members named Dr. John R. Callaway of Pauls Valley, past secretary-treasurer, to that position permanently.

Meanwhile, membership fees for twelve doctors in Garvin county (all but one of the county membership) have been sent in to the Executive Secretary's office for 1940 dues.

EDITORIALS

THE PLATFORM OF THE AMERICAN MEDICAL ASSOCIATION*

1. *The establishment of an agency of Federal Government under which shall be coordinated and administered all medical and health functions of the Federal Government exclusive of those of the Army and Navy.*

Today the medical and health functions of the United States are divided among a multiplicity of departments, bureaus, and federal agencies. Thus, the United States Public Health Service is in the Federal Security Department; the Maternal and Child Welfare Bureaus in the Department of Labor; the Food and Drugs administration in the Department of Agriculture; the Veterans' Administration and many other medical functions are separate bureaus of the government. The WPA, CCC, and PWA are concerned with a similarity of efforts in the field of preventive medicine. The Federal Works Administration and the Federal Housing Administration also have some medical functions.

Since 1875 the American Medical Association has urged the establishment of a single agency in the Federal Government under which all such functions could be correlated in the interest of efficiency, the avoidance of duplication, and a saving of vast sums of money. Such a federal health agency, with a secretary in the cabinet, or a commission of five or seven members, including competent physicians, would be able to administer the medical and health affairs of the Government with far more efficiency than is now done.

2. *The allotment of such funds as the Congress may make available to any state in actual need for the prevention of disease, the promotion of health and the care of the sick on proof of such need.*

The physicians of the United States have given freely of their time and of their funds for the care of the sick. Their contributions to free medical service amount to at least $1,000,000 a day. The physicians of this country have urged that every person needing medical care be provided with such care. They have urged also the allotment of funds for campaigns against maternal mortality, against venereal disease, and for the investigation and control of cancer. The medical profession does not oppose appropriations by Congress of funds for medical purposes. It feels, however, that in many instances states have sought aid and appropriations for such functions, without any actual need on the part of the state, in order to secure such federal funds as might be available. It has also been impossible, under present techniques, to meet actual needs which might exist in certain states with low per capita incomes, with needs far beyond those of wealthier states, in which vast sums are spent.

It is proposed here simply that Congress make available such funds as can be made available for health purposes; that these funds be administered by the federal health agency, mentioned in the first plank of this platform, and that the funds be allotted on proof of actual need to the federal health agency, when that need be for the prevention of disease, for the promotion of health, or for the care of the sick.

3. *The principle that the care of public health and the provision of medical service to the sick is primarily a local responsibility.*

Obviously if federal funds are made available to the individual states for the purposes mentioned in the second plank of this platform, there might well be a lessened tendency in many communities to devote the community's funds for the purpose, and, in effect, to demand that the Federal Government take over the problem of the care of the sick. Hence, it is suggested that communities do their utmost to meet such needs with funds locally available before bringing their need to the federal health agency, and that the federal health agency determine whether or not the community has done its utmost to meet such need before alloting federal funds for the purpose.

4. *The development of a mechanism for meeting the needs of expansion of preventive medical services with local determination of needs and local control of administration.*

The medical profession is not static. It wishes to extend preventive medical service to all of the people within the funds available for such a purpose. Obviously, this wil require not only a federal health agency which may make suggestions and initiate plans, but also a mechanism in each community for the actual expansion of preventive

*This platform, promulgated by the American Medical Association Board of Trustees, was announced at the Annual Conference of Secretaries and Editors of Constituent State Medical Associations, held at the offices of the American Medical Association, 535 North Dearborn Street, Chicago, on November 17 and 18, 1939.

medical service and for the proper expenditure of funds developed both locally and federally. In the development of new legislation such mechanism may be suitably outlined.

5. *The extension of medical care for the indigent and the medically indigent with local determination of needs and local control of administration.*

The medical profession does not yield to any other group in this country in its desire to extend medical care to all of those unable to provide themselves with medical service. The American Medical Association through its House of Delegates has already recognized the possible existence of a small group of persons able to provide themselves with the necessities of life commonly recognized as standard in their own communities, but not capable of meeting a medical emergency. It is recognized, however, that only persons of the same community, fully familiar with the circumstances, can determine the number of people who come properly under such classification and that only persons in actual contact with such instances are capable of administering suitably and efficiently the medical care that may be required. Hence, it is the platform of the American Medical Association that medical care be provided for the indigent and the medically indigent in every community, but that local funds to be first utilized and that local agencies determine the nature of the need and control the expenditure of such funds as may be developed either in the community or by the Federal Government.

6. *In the extension of medical services to all the people, the utmost utilization of qualified medical and hospital facilities already established.*

In the so-called National Health Program it is asserted that one-half the counties of the United States are without suitable hospitals, and vast sums are requested for the building of new hospitals. In contrast, reputable agencies within the medical profession assert that there are only thirteen counties more than thirty miles removed from a suitable hospital and that in eight of those thirteen counties there are five people per square mile. In the United States today the percentage of hospital beds per 1,000 of population is higher than that of any other country in the world. This fact is completely ignored by those who would indulge in a program for the building of great numbers of new hospitals.

Moreover, it seems to be taken for granted that hospital building has languished in recent years, whereas considerable numbers of hospitals have been built with federal funds by various state agencies and also by the PWA, the WPA, and by the Federal Works Administration.

Analyses may indicate that in many instances such hospitals were built without adequate study as to the need which existed or as to the possible efficient functioning once it was erected. Moreover, there is evidence that in recent years many of the hospitals of the United States, known as nonprofit voluntary hospitals, have had a considerable lack of occupancy due no doubt to the financial situation in considerable part. It seems logical to suggest, then, that such federal funds as may be available be utilized in providing the needy sick with hospitalization in these well-established existing institutions before any attempt is made to indulge in a vast building program with new hospitals. In this point of view the American College of Surgeons, the American Hospital Association, the Catholic Hospital Association, the Protestant Hospital Association, and practically every other interested voluntary body agree.

Again, it has been argued that the demands for medical care in some sections of the country might require the importation of considerable numbers of physicians or the transportation of numbers of physicians in the areas in which they now are to other areas. In this connection it would seem to be obvious that a change in the economic status of the communities concerned would result promptly in the presence of physicians who might be seeking locations. The utilization of existing qualified facilities would be far more economical than any attempt to develop new facilities.

7. *The continued development of the private practice of medicine, subject to such changes as may be necessary to maintain the quality of medical services and to increase their availabilty.*

In the United States today our sickness and death rates are lower than those of any great country in the world. This fact was recognized by the President of the United States when he sent the National Health Program to the Congress for careful study. The President emphasized that a low death rate may not mean much to a man who happens to be dying at the time of tuberculosis. The medical profession recognizes the importance of doing everything possible to prevent every unnecessary death. At the same time it has not been established by any available evidence that a change in the system of medical practice which would substitute salaried government doctors for the private practitioner or which would make the private practitioner subject to the control of public officials would in any way lower sickness and death rates.

There exists, of course, the fact that some

persons are unable to obtain medical service in the circumstances in which they live and that others, surrounded by good facilities, do not have the funds available to secure such services. Obviously, here again there is the question of economics as the basis of the difficulty and perhaps lack of organization in distribution of medical service and a failure to utilize new methods for the distribution of costs which might improve the situation.

The medical profession has approved prepayment plans to cover the costs of hospitalization and also prepayment plans on a cash-indemnity basis for meeting the costs of medical care. It continues, however, to feel that the development of the private practice of medicine which has taken place in this country has led to higher standards of medical practice and of medical service than are elsewhere available and that the maintenance of the quality of the service is fundamental in any health program.

8. *Expansion of public health and medical services consistent with the American system of democracy.*

Careful study of the history of the development of medical care in various nations of the world leads to the inevitable conclusion that the introduction of methods such as compulsory sickness insurance state medicine and similar techniques results in a trend toward communism or totalitarianism and away from democracy as the established form of government. The intensification of dependence of the individual on the state for the provision of the necessities of life tends to make the individual more and more the creature of the state rather than to make the state the servant of the citizen. Great leaders of American thought have repeatedly emphasized the fact that liberty is too great a price to pay for security. George Washington said, "He who seeks security through surrender of liberty loses both." Benjamin Franklin said, "They that can give up essential liberty to obtain a little temporary safety deserve neither liberty nor safety."

In these times when the maintenance of the American democracy seems to be the most important objective for all the people of this country, the people may well consider whether some of the plans and programs that have been offered for changing the nature of medical service are not in effect the first step toward an abandonment of the self-reliance, free will, and personal responsibility that must be the basis of a democratic system of government.

MALTA FEVER: A WARNING?

Malta fever is not a new disease. If it had its origin with Maltese civilization, it may date back to the rich Neolithic culture, which existed there 3000 years B. C. It was first described by Burnett in 1814, as "the remittent fever of the Mediterranean." It was differentiated from typhoid fever by Marston in 1861. In 1886, Bruce studied a human case in Malta and isolated a coccoid organism (the bacteria of Brucella), which in 1893 he designated as the *micrococcus melitensis*. Hughes supplied the name Undulant fever, in 1896.

In 1895, Bang, studying infectious abortion in cattle, demonstrated the *B. abortus*, the name being supplied by MacNeal and Kerr in 1910. Theobald Smith and Fabyan in 1912 first suggested human infection from cattle suffering from infectious abortion. This suggestion was pursued by Evans in 1918 and a close relationship between the human and bovine type was proved. Keefer of Baltimore, was the first to report a proven human case arising from the abortus organism.

Today, no one doubts that Malta fever is found throughout the world, and that it is a cause of an appreciable morbidity with a relatively low mortality. But there is good reason to doubt the diagnosis in many cases now being treated as Malta fever.

Time and space will not permit a comprehensive discussion of diagnosis. Before arriving at a final diagnosis in any given case, it would be well to read the chapter on Undulant (Malta) Fever in the 13th Edition (1938) of Osler, Edited by Henry Christian, or in Meakins Practice of Medicine, 2nd Edition, 1938, or other similar discussions.

Keeping the diagnostic criteria and the clinical course well in hand, the physician must remember that the disease may simulate many febrile conditions which are often much more serious than Malta fever. The following serve as examples: tuberculosis, malaria, typhoid fever, influenza, chronic bronchitis, rheumatic fever, pyelitis, bacterial endocarditis, specific orchitis and epididymitis. Not only is it difficult to make a differential clinical diagnosis, but the so-called specific diagnostic methods often leave us in serious doubt. The agglutination test may be positive in normal individuals. Not only may it be positive in those who have never had clinical Malta fever, but it may be positive in those who have had clinical disease with recovery, or in those who have had the specific vaccine whether they have or have not suffered from Malta fever.

Meakins says that blood cultures may be positive in the first week. He also suggests guinea pig inoculations with the patient's blood or excreta, may produce aggiutinins in the animal's blood within five weeks, also the development of poly-arthritis and orchitis. The animal may be killed in six to eight

weeks and the organisms recoverd from the visceral organs.

Discussing the skin test, Meakins says, "It's diagnostic value depends upon the extent of the reaction. Weak or doubtful reactions, if taken seriously, lead to confusion in diagnosis." Obviously it is not safe to accept a positive agglutination test or a skin test as final. Neither is the opsonocytophagic test to be accepted without question.

It is not only necessary to make an accurate diagnosis of Malta fever before deciding upon a long drawn-out course of therapy, but it is equally important to remember that even though Malta fever is present, there may be associated with it other more serious pathological conditions, such as those mentioned above.

In the light of our present knowledge of therapy, it is much more important to diagnose the latter pathological conditions than the Malta fever. In other words, life and safety seldom hinge upon the prompt recognition and treatment of Malta fever. This cannot be said of tuberculosis, typhoid fever or acute rheumatic fever. It is not uncommon to discover pulmonary tuberculosis which has reached an advanced stage, while the patient, with a sense of false security, awaited the promised cure through the continued use of so-called specific vaccine for Malta fever. Malta fever, untreated, has a very low mortality and at the present time, it is doubtful if either the morbidity or mortality is materially influenced by treatment. The long list of remedies recommended for this condition immediately raises a serious doubt as to their value. Likewise, it may be said that vaccines and foreign proteans have no proven specificity. Finally, we should not forget that unwarranted therapeutic conclusions may result from the natural remissions in the febrile course of the disease.

NATIONAL PHYSICIANS COMMITTEE FOR THE EXTENSION OF MEDICAL SERVICE

There have been many inquiries relative to the objects and functions of the above Committee and the attitude of the American Medical Association relative to their activity.

The first question asked is relative to the necessity of such a committee. The primary purpose is the advancement of the policies of the A. M. A. with reference to the perpetuation of the present system of medical practice and a satisfactory distribution of medical service. It is necessary to have some such organization in order that this may be done. It has been impossible for the A. M. A. to meet the propaganda broadcast by the advocates of socialized medicine. There have been but few properly informed individual who knew or cared how organized medicine felt about this subject.

In order that true information may be brought to the laymen ample funds must be contributed and these donations can not be accepted by the A. M. A. as it would be a violation of its constitution to indulge in such a program. Their function must be strictly scientific. Now it appears that to protect the scientific practice of our profession some other organization must accept the responsibility of raising funds and preparing a program to meet this propaganda, the purpose of which is to overthrow our present system of practice.

Much accurate information has been accumulated relative to the distribution of medical service and this information will be used by this Committee in their effort to bring about an improvement in this situation.

So far as I am informed the American Medical Association has not given its endorsement to this movement. However, when we notice the names of the members of the Executive Committee it seems quite evident that there can be no conflict.

In Oklahoma we are going forward with the perfection of an organization to support this Committee in their efforts. Dr. Horace Reed is acting as temporary Chairman and Dr. Thomas McElroy as temporary Secretary. There is a big task before the organized medical profession in Oklahoma and it is hoped that we will have whole hearted support in this effort to meet the socialistic propaganda that has been so skillfully and persistently placed before the people of the Nation.



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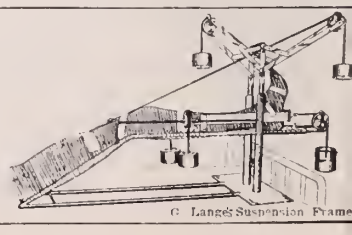
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• THE PRESIDENT'S PAGE •

In cooperation with the officers and the Council of the Oklahoma State Medical Association in their endeavor to place before all members the current problems of their Association, the Editorial Board has seen fit to create a new feature for the Journal, to be known as "The President's Page," and which will hereafter appear as a regular monthly feature.

This page does not have as its objective the creation of additional editorial facilities, but rather to provide the desired medium to give to the members a monthly report from their President.

L. S. WILLOUR, Editor-in-Chief
NED SMITH
L. J. MOORMAN.

WHEN A HEAD COLD BEGINS

Case No. 1 (C. S.) Male, white, age 25. Acute head cold. After a few inhalations from 'Benzedrine Inhaler' the turbinates were shrunk to normal within seven minutes.

'Benzedrine Inhaler' is particularly valuable when used at the onset of a head cold—at the very first sneeze. By relieving congestion, it improves respiratory ventilation and assists in maintaining drainage of the nasal accessory sinuses.

The early use of 'Benzedrine Inhaler' is especially indicated for your patients who catch cold easily.

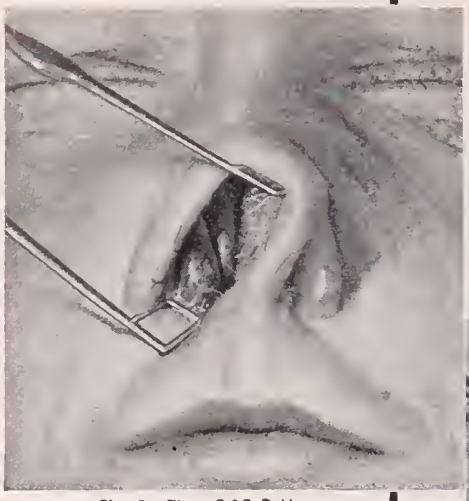


Fig. 1—Time 2:15 P.M.
Before treatment.



Each tube is packed with amphetamine, S. K. F., 325 mg.; oil of lavender, 97 mg.; menthal, 32 mg. 'Benzedrine' is S. K. F.'s trade mark, Reg. U.S. Pat. Off.

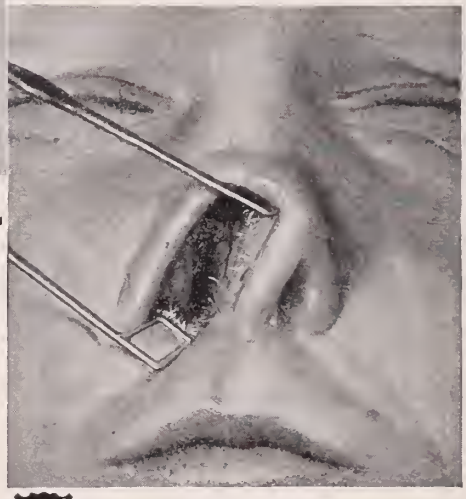


Fig. 2—Time 2:22 P. M.
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COUNTY SOCIETIES . . . NEWS NOTES

Statewide Cancer Program Slated To Begin February 5

With the completion of plans for the post-graduate course in Cancer, extensive preliminary preparations are under way this month and the wheels of the program will begin to turn February 5, Dr. W. F. Keller, Chairman of the Cancer Committee of the Oklahoma State Medical Association, has announced.

Sponsored by the Cancer Committee, in cooperation with the Women's Field Army of the American Society for the Control of Cancer, and the Public Health Department of the State of Oklahoma, the course will draw the attention of all post-graduate agencies in the country, for the Oklahoma program is the first of its kind in the United States.

Dr. J. Samuel Binkley, assistant head of the Chest department of Memorial Hospital, New York City, will be the instructor. A graduate of the University of Oklahoma and Harvard Medical School, Dr. Binkley is a Surgeon and Rockefeller Clinical Fellow in Cancer Research, and holds membership in Phi Beta Kappa, Phi Beta Phi, the New York Academy of Science, the International Union Against Cancer, and the Harvard Medical Society of New York.

Centers for the course of instruction are being selected in forty cities of the state. Dr. Binkley will spend one day in each city selected, addressing lay audiences in the afternoon and the medical societies in the evenings. The program, which follows the one outlined for 1940 by the American Society for the Control of Cancer, will have its debut February 5 in Miami, Ottawa county, with Vinita, Craig county, to receive the instructor February 6.

The Cancer program is one of the major projects of Dr. W. A. Howard in his presidential administration. The Cancer Committee, whose members, besides Dr. Keller, are Dr. Paul Champlin and Dr. Ralph McGill, knows of no finer way to build good will among the people who are daily being taught to doubt the ideals of the medical profession than to show through this program that the profession, regardless of the attacks being made upon it, is still striving to give to the American people the best medical service in the world.

Additional information for the forthcoming course, scheduled for two months' duration, may be secured from the Cancer Committee through the Executive Secretary's office, 210 Plaza Court, Oklahoma City.

(Continued on Page 36)

Post-Graduate Course For Pediatricians Starts Soon

The physicians of the state will welcome the news that the two-year post-graduate program in Pediatrics will begin February 12. The Committee on Post-Graduate Study has secured the services of Dr. Wayne A. Rupe and Dr. Hugh McCulloch, both of St. Louis, Missouri, two of the outstanding pediatricians in this country, as instructors to begin the course, and other equally prominent pediatricians will be added to the faculty later on.

Dr. Rupe will be remembered by Oklahoma physicians for the excellent courses given in the state during the years of 1925 and 1926. Dr. McCulloch, Assistant Professor of Clinical Pediatrics, Washington University, has also given courses in this state.

The Committee has again been successful in securing financial cooperation of the Commonwealth Fund of New York, and the Oklahoma State Health Department, so that the fee for the course will be established at $6.00, which will include the manual of Pediatrics lectures, and a certificate of attendance without additional cost, to those physicians who are eligible.

The first circuit will be established in Northeastern Oklahoma and will likely include Tulsa, Bartlesville, Claremore, Vinita, and Miami, as the teaching centers.

In addition to the didactic lectures and clinics, the instructor will be available for free consultations with the registrants, and will give lay lectures when requested.

Further information may be obtained by writing the Committee on Post-Graduate Education, 210 Plaza Court, Oklahoma City, Oklahoma.

Dr. H. B. McClure, Chickasha, was named president of the Southern Oklahoma Medical Association for 1940 at the groups' December meeting in Ardmore. Dr. J. B. Morey of Ada was elected the new secretary-treasurer. Ada was selected as the meeting place for the association's March sessions. The association is composed of doctors in 17 southern Oklahoma counties.

Dr. Eleonora L. Schmidt of Norman this month attended a meeting of the board of directors of the American Medical Women's Association in Chicago.

New chief of staff of the Ponca City Hospital is Dr. R. G. Obermiller, secretary of the Kay County Medical Society during 1939. He succeeds Dr. D. M. Gordon.

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• OBITUARIES •

Dr. William McIlwain

Dr. William McIlwain, 82, pioneer western Oklahoma physician, died November 28 at the home of his nephew in Detroit, Mich. At the time of his death he was an honorary member of the State Medical Association.

Dr. McIlwain came to Lone Wolf, Okla., when the area was first opened in September, 1901. He had been a practicing physician there until 1937, when ill health forced him to retire.

The physician enlisted in the medical corps of the American Expeditionary Forces at Fort Riley, Kan., on November 15, 1917, when he was 59 years of age, 19 years over the maximum age allowed at the time. At the end of the war he was discharged and received an honorary major's commission in the reserve corps.

In 1929 he was awarded a medal for heroism under enemy fire for participation in a battle with the Lost Battalion in an effort to escape on August 27, 1919.

Funeral services were held December 3 in Lone Wolf, with burial also in that town.

Dr. D. D. McHenry

A heart ailment resulted in the death of Dr. D. D. McHenry, Oklahoma City eye, ear, nose and throat specialist, December 28 in St. Petersburg, Fla. where he was spending the winter with his wife.

Funeral services were held January 2 in Oklahoma City, with burial in Rose Hill cemetery.

Doctor McHenry came to Oklahoma from Princeton, Mo., 35 years ago, entering practice in Cushing and moving to Oklahoma City in 1910. He served as president of the Oklahoma County Medical Society in 1923. He was a member of the American College of Surgeons and the American Academy of Ophthalmology and Otolaryngology, as well as his county and state association affiliations.

Dr. George E. Kerr

Dr. George E. Kerr, Chattanooga's (Okla.) only practicing physician for the past 32 years, died December 25 in the Wichita Falls General hospital. He was 72 years old.

Doctor Kerr was born in Ontario, Canada, and was graduated from medical school in 1894. He came to Chattanooga in 1907.

Last rites were conducted from the Chattanooga high-school auditorium December 27, with the Rev. Grant Merchant, pastor of the Presbyterian community church, officiating. Military rites were conducted by Legionnaires at the cemetery.

A dinner at the Western Hospital at Supply, given by Dr. John L. Day and staff, preceded the meeting this month of the Woodward County Medical Society. Following election of officers, in which Dr. Floyd Newman of Shattuck was named president, and Dr. C. W. Tedrowe of Woodward reelected secretary-treasurer, Dr. Joe Duer read a paper on "Female Endocrines." Drs. E. F. Camp of Buffalo and C. R. Silverthorne of Woodward were elected honorary members of the county society.

Opportunity for a young physician to enter into practice in Sawyer, Kansas, was revealed in a notice from Mr. C. L. Jackson of that city. Mr. Jackson is postmaster in Sawyer and probably will answer communications from any physicians interested.

Mrs. Vert Hunter, owner and superintendent of the Sayre hospital, has been notified that the Council on Medical Education and Hospital of the American Medical Association has voted to admit the hospital to the Hospital Register of the A. M. A.



STUDIES IN THE AVITAMINOSES



This page is the first of a series on vitamin deficiencies presented by the research division of The Upjohn Company, not merely because of the profession's widespread interest in the subject, but also because of the service which these reproductions might render toward earlier recognition of vitamin deficiency states.

The Cutaneous Manifestations of Vitamin A Deficiency



Goosepimple-like papules, occasionally seen in vitamin A deficiency, occur most frequently on thighs and arms, but may appear anywhere on the skin. More common than the acneform eruption.



Acneform papules of vitamin A deficiency. Pustulation is rare, but crusts and scales may be observed. Dryness of involved skin precedes both types of lesions.

Although the classic manifestations of vitamin A deficiency are familiar to every physician, many of these represent late stages of deprivation. In some cases, cutaneous changes may provide an opportunity for earlier recognition. These cutaneous changes, when fully developed, consist of two distinct types of eruptions—a goosepimple-like papule and an acneform lesion in which pustulation rarely occurs. The absence of perspiration is due to atrophy of the sweat glands and keratinizing metaplasia of the ducts. The papular cornified lesions are due to the keratinization of the sebaceous glands and hair follicles. In some subjects, accentuation in pigmentation due to an increase in melanin and melanin-building pigments is observed. Unlike the ocular manifestations of vitamin A deficiency, the skin lesions respond slowly to specific therapy, requiring from 4 to 12 weeks for their eradication.

• •

A two-page insert, presenting full-color reproductions of vitamin A deficiency lesions, and so organized that it may be easily retained for future reference, appears in the January 20 issue of the Journal of the American Medical Association.

UPJOHN

• NEW BOOKS •

ACCEPTED FOODS, AND THEIR NUTRITIONAL SIGNIFICANCE, a publication of the Council on Foods of the American Medical Association. Cloth, Price, $2.00 postpaid. Pp. 512; Chicago: American Medical Association, 1939.

"Accepted Foods, and Their Nutritional Significance" contains descriptions and detailed information regarding the chemical composition of more than 3,800 accepted products, together with a discussion of the nutritional significance of each class of foods. The book provides also the Council's opinion on many topics in nutrition, dietetics and the proper advertising of foods.

This book will be a welcome reference book for all persons interested in securing authoritative information about foods, especially the processed and fabricated foods which are widely advertised. The accepted products are classified in various categories; fats and oils; fruit juices, including tomato juice; canned and dried fruit products; grain products; preparations used in the feeding of infants; meats, fish and sea foods; milk and milk products other than butter; foods for special dietetic purposes; sugars and syrups; vegetables and mushrooms; and unclassified and miscellaneous foods, including gelatin, iodized salt, coffee, tea, chocolate, cocoa, chocolate flavored beverage bases, flavoring extracts, dessert products, baking powder, cream of tarta, baking soda, cottonseed flour. There is a suitable subject index as well as an index of all the manufacturers and distributors of food products that stand accepted by the Council on Foods.

"Accepted Foods" is indispensable for the library of every physician concerned with foods and nutrition.

Dr. Turner at Medical Society Meetings

On the programs of three medical society meetings of recent date was Dr. Henry H. Turner, President-Elect of the Oklahoma State Medical Association.

Dr. Turner spoke before the Golden Belt Medical Society at its meeting in Salina, Kan., January 4, on "Endicrinology in General Practice." Earlier, he gave three papers at the Post-Graduate Medical Assembly of South Texas in Houston, and Southern Medical Association meeting in Memphis, Tenn.

Hospitals Receive Radium Loans

Thirteen hospitals will receive loans of radium from the U. S. Public Health Service within the next few weeks, it has been announced. The grants were made in cooperation with state departments of health and cancer commissions. The terms stipulate that the institutions must make no charge to the patients for use of the radium, giving preference to those in the lowest income groups. High standards for the personnel administering the treatment also are required as a condition of the loan.

The hospitals to receive the radium are: Ellis Fischel Hospital, Columbia, Mo.; El Paso City-County Hospital, El Paso, Teras; Baylor University Hospital, Dallas, Texas; Hillman Hospital, Birmingham, Ala.; St. Joseph Infirmary, Louisville, Ky.; Robert Winship Clinic, Emory Univresity, Ga.; Greenville General Hospital, Greenville, S. C.; Tri-County Hospital, Orangeburg, S. C.; Broadlawns General Hospital, Des Moines, Iowa; Indianapolis City Hospital, Indianapolis; University of Pittsburgh; New Britain General Hospital, New Britain, Conn.; and Receiving Hospital, Detroit.

Dr. E. R. Muntz of Ada was in Oklahoma City January 6 taking the written examinations of the American Board of Obstetrics and Gynecology.

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ABSTRACTS : REVIEWS : COMMENTS and CORRESPONDENCE

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments From
LeRoy Long Clinic
714 Medical Arts Building, Oklahoma City

Reflex Syndromes Associated with Neuroglioma in Old Sections of Nerves Without Physiological Repair (Les Syndromes Reflexes du Neurogliome dans les Sections Nerveuses Anciennes non Physiologiquement Reparees) by Rene Leriche (Clinique Chirurgicale de Strasbourg). Journal de Chirugie (Paris). Vol. 54, No. 3, Sept., 1939.

At the outset the celebrated author disagrees most sharply with the statements made by some writers, indicating that regeneration, following the division of a nerve is common and habitual, and he presents data which show conclusively that in many instances there is no regeneration. He believes that in nearly every case of section of a nerve, abandoned to itself, (abandon-nee a elle-meme) there is permanent paralysis. This is quickly followed by the statement that he is speaking of true, verified division of the nerve, and not a clinical appearance of section (division). Here is the exact language employed: "Je dis section nerveus vraie, verifiee et non une apparence clinique de section".

If, in the dog, there is a clean-cut experimental division of a peripheral nerve, without an appreciable hiatus, regeneration may result from the reaction in connection with the cut ends of the nerve ("la regeneration peut se produire par le jeu naturel de la soudure des deux bouts"), but even then there is a slight space between the two ends. If the space is as much as 2 cm. to 3 cm. regeneration is uncertain. If the space is 4 cm., there is never regeneration.

Here is a most significant statement: "Chez l'homme il est possible qu'une section nette, sans delabrement des tissus voisins, soit suivie d'une regeneration. C'est possible. Mais, les faits d'observation courante ne montrent pas que cela soit." That is to say, there is no evidence that it ever occurs.

Here is another statement of importance: "Surgical neurotomies, made voluntarily or by maladresse, if left alone, are not followed by regeneration. The author says that he has observed patients in whom there had been sections of the median or the ulna for the relief of causalgia. Notwithstanding many years had passed, there had been no return of function.

Again, he has done late operations upon the radial and the ulna in an effort to relieve the paralyses following division of the nerves by novices in connection with operative procedures upon the arm. At operation for suture of the nerves, the ends were found almost in contact, with habitual small gliomatous enlargement. In the interval between the accidents and the late approximation by suture, there had not been any evidence of resumption of function.

The distance of the divided ends of the nerve from each other is not the only difficulty, for in the neglected case of accidental section of a peripheral nerve there is the development of a cicatrix about the ends of the divided nerve to the extent that it blocks the extension of neurons from the proximal sides. When the extension of neurons is blocked it is impossible to have resumption of function.

Following a destructive lesion of a peripheral nerve in which it is divided, a gross examination may show apparent union, but in most of the cases of apparent union a histological examination shows an intermediary tract filled with sclerotic cicatrix through which neurons can not pass.

Non-regeneration after suture of divided nerves is discussed. While repair by suture should always be undertaken, the results are not satisfactory in the cases of all patients. Again, the result is better in particular nerves; poor in others. In connection with this bizarre and important conclusion he refers to the dicta of his master, Jaboulay, who, while Leriche was his interne in 1903, said that *each nerve reacts in an individual way after suture.* From this point of view, he called the radial a good nerve, the median a mediocre nerve and the ulna a bad nerve.

War surgery has shown the value of these observations.

Quoting a report by Gosset at the London Congress, 1923: following suture of the radial, there were 56% of cures or great amelioration. In the median 44%, and in the ulna 17%. It is interesting and instructive to study this report by Gosset in connection with the dicta of Jaboulay as reported by Leriche in this article.

LeRoy Long.

"Studies in Artificial Ovulation with the Hormone of Pregnant Mares Serum": Samuel L. Siegler, M. D., F. A. C. S., and M. J. Fein, M. D., Brooklyn, N. Y.; American Journal of Obstetrics and Gynecology; December, 1939, Vol. 38, No. 6, Page 1021.

These authors have carried out experimentation in animals and have given this hormone a therapeutic trial in human beings.

"In many respects the gonadotropic fraction of the pregnant mares' serum closely resembles the gonadotropic activity of the extracts of the anterior pituitary." "Artificial ovulation has been shown to have been produced in the rabbit, the monkey, and the human being, by the use of the hormone of pregnant mares' serum." "Conservative and controlled clinical observations will determine the ultimate efficacy of this new hormone. Clinically, it may prove of value in those cases where gonadotropic stimulation appears desirable." "Being a protein derivative, prudent care should be exercised in the administration of this potent hormone."

They were able, on the whole, to substantiate the work of Davis and Koff.

They demonstrated that the use of pregnant mares' serum produced an enlargement of the ovary and corpus luteal formation in a number of patients. Their most gratifying results were in a few instances of amenorrhea and they attribute pregnancy to the treatment in two instances.

Comment: This is an interesting report largely because it concerns pregnant mares' serum which is at the present time the most potent gonadotropic type of stimulant available for producing ovulation in the human ovary. The results of these investigations are not conclusive and it is well demonstrated that caution must be employed in the use of this rather potent hormone.

Wendell Long.

"The Influence of Repeated Radiation on the Salvage Statistics of Carcinoma of the Cervix": Lewis C. Sheffey, M. D., Philadelphia, Pa.; American Journal of Obstetrics and Gynecology; November, 1939, Vol. 38, No. 5, Page 907.

Scheffey feels that an incomplete estimate of five-year salvage may result when statistical reports do not take into account the prolongation of life that results

from repetition of treatment by irradiation in the observation period.

In their experience 53.8 per cent of 39 patients who were alive from 5 to 16 years after the initial radiation treatment for carcinoma of the cervix received a single course of therapy. The prolongation of life in the remaining 46.2 per cent followed reradiation for recurrence during the observation period.

The relative five-year salvage rate of patients in the Jefferson clinic, receiving a single course of radiation therapy and remaining free of recurrence thereafter was 9.2 per cent.

The relative five-year salvage rate, including the group of patients whose prolongation of life has been dependent upon reradiation for recurrence was 17.1 per cent.

Comment: This is an extremely low salvage rate for the entire group. However the advantages of reradiation for recurrence are about the same as found in other series of patients. It would seem quite logical that strenuous and radical irradiation therapy should be employed in the initial treatment with radium radiation and x-ray radiation covering the entire pelvis. It is only in this way that the greatest number of cures can be expected.

However, there are certain to be a number of recurrences and this report well demonstrates the advantages of reradiation in producing a prolongation of symptomless life and it is to be recommended as a procedure in recurrence of carcinoma of the cervix. The identification of such recurrences is an extremely valuable part of the careful follow-up of all patients who have been treated for carcinoma of the cervix and may be of inestimable value in prolongation of their life and reduction of symptoms.

Wendell Long.

"The Effect of Carcinoma of the Cervix Uteri and Its Treatment Upon the Urinary Tract"; Houston S. Everett, M. D., Baltimore, Md.; American Journal of Obstetrics and Gynecology; November, 1939, Vol. 38, No. 5, Page 889.

This author agrees with the widely recognized fact that untreated and uncontrolled carcinoma of the cervix uteri produces destructive effects upon the urinary tract. He is primarily interested in this study in the alteration in the urinary tract in patients who have been treated by irradiation and particularly in those who have been "cured".

He found in reviewing the patients under his care that 50 per cent of apparently cured patients who had been treated for carcinoma of the cervix by irradiation showed evidence that the urinary bladder had been affected by the treatment, but that only about 20% showed effects that were of any serious significance.

He also found that approximately 50% of patients treated by irradiation showed evidence of some obstructive lesion involving the lower ureters with resulting dilatation of the kidney pelves and the ureters above the point of obstruction, but here again only about 15% of these lesions were sufficiently severe to be of clinical importance.

In reviewing the patients who had investigation of the urinary tract before treatment was instituted and also investigation after completion of treatment he came to the conclusion "that the presence of lesions of the upper urinary tracts before treatment in patients with carcinoma of the cervix is of grave prognostic significance."

He also came to the conclusion that the incidence of 15 to 20 per cent of serious urinary tract lesions in patients cured of carcinoma of the cervix is sufficiently high to render routine urologic study of such patients a justifiable and an important part of the follow-up procedure.

Everett is in accord with other authors in that the serious lesions of the urinary tract are most apt to occur late, usually from one to three years after the completion of treatment and presumably as a result of the endarteritis in the area of carcinoma treated by irradiation.

Comment: It is common knowledge that urinary tract changes are extremely frequent in patients with carcinoma of the cervix uteri. In the untreated instances and in those who die as a result of the carcinoma, urinary tract changes are almost universal. There is no question but that the encroachment of the tumor upon the ureters and bladder produces many of these urinary pathological changes.

This report is of value and interest largely because it calls attention to the numerous urinary tract changes in patients who have been apparently cured or salvaged and such urinary tract changes must be accepted as the undesired result of the treatment which produces a cure of the disease carcinoma. While every attempt should be made to minimize the affect of treatment upon the urinary tract, it still remains that the treatment of carcinoma of the cervix is radical treatment and in instances where cures are obtained, there frequently will remain certain urological changes that are undesired. The importance of this communication lies in the recognition of these lesions and their proper treatment in the follow-up of the carcinoma patients.

In those instances where there are urinary tract changes and pain and where one cannot determine definitely whether or not there is residual tumor tissue, a real problem ensues as reirradiation treatment is valuable if the lesion is carcinoma and the treatment is dilaterious if the changes are due to irradiation effects. In such instances, however, it is wise to have complete and thorough investigation of the urinary tract as well as the pelvis and if there still remains doubt, a trial of irradiation by external x-ray is the procedure of choice. In the event there is relief of pain one can be reasonably sure that the disease causing pain was carcinomatous recurrence or extension whereas if the pain is not greatly relieved it is more probably not this cause. In the event the pain is exacerbated, one can feel reasonably sure that recurrence or residual tumor tissue is not responsible.

Wendell Long.

"Surgery of Carotid Body Tumors." R. W. McNealy, M. D. and R. F. Hedin, M. D., Chicago. The Journal of The International College of Surgeons, October 1939, Page 285.

Carotid body tumors, although rare, are being reported with increasing frequency.

The normal carotid body is approximately the size of a millet of wheat and is located at, or near, the bifurcation of the common carotid artery. Its exact location with reference to the crotch of the carotid is extremely variable. It may be absent on either one or both sides. The gland generally increases in size up to the age of 30 years after which it remains stationary and the glandular structure is replaced by connective tissue elements.

The many varieties of cellular elements found in the carotid body have caused dispute as to its origin. As one or the other of its elements has been emphasized by different investigators, so have been formulated the various theories concerning its origin. Three principal genetic elements are suggested: epithelial, vascular and nervous.

The opinion that the pharyngeal epithelium might serve as a precursor is usually discredited. The vascular and nervous theories are supported by the fact that the development of the carotid body is intimately bound with the differentiation of the third aortic arch of the embryo which is the anlage of the internal carotid artery. Many investigators believe that the carotid body originates from nerve tissue and belongs to the paraganglionic system.

As yet no function has been attributed to the carotid body. It is known that the removal of one carotid body does not stimulate the growth of its fellow. It is also true that individuals have been unaffected by removal of both carotid bodies. It has been found that an extract made from the carotid bodies of horses cause a rise in blood pressure when injected into rabbits. Another investigator claimed that when the carotid body was removed in cats, glycosuria developed. Another found that when the carotid bodies were removed from cats, a condition not unlike osteomalacia developed.

Another removed the carotid bodies at autopsy and was unable to find adrenaliu, despite the chromaffin like material present.

Various terms have beeu used to describe these tumors such as perithelioma, paraganglioma, neuroblastoma, and sarcoma, depending on the presence of the predominate tissue element. At the present time most authors prefer to call these growths "carotid body tumors."

Tumors of the carotid body vary in size. Often they are approximately the size of a small potato. The tumors appear globular and have a thin capsule. They are of rather firm cousistency, but their most strikiug feature is their extreme vascularity. One report found the incidence of malignancy to be 17 per ceut in 134 cases. Another author reporting 12 cases, found six to be malignant. Regional nodes are often involved, but distant metastases is rare.

The diagnosis of carotid tumor is seldom made preoperatively. Lipoma, tuberculous adeuitis, branchial cyst and aneurysms are conditions to be considered in the differential diagnosis. The location of carotid body tumors is usually at the level of the bifurcation of the common carotid artery opposite the level of the thyroid cartilage. Occasionally, they are some distance removed from the usual site, one instance being reported in which the tumor was located in the parotid region and attached by a long pedicle to the bifurcation of the commou carotid. The growth is usually ovoid or potato-shaped aud is partially covered by the sternocleidomastoid muscle. Movement can be made from side to side but the tumor cannot be moved up and down because of its attachment to the large vessels. The overlying skin is not adherent, aud when the tumor is moderately large a non-expansile pulsation is felt. Because of the vascularity a bruit can often be heard over the region. Bulging into the pharynx has been noted in the larger tumors. Laboratory tests and x-rays are of no direct aid in making a preoperative diagnosis.

All carotid body tumors are characterized by a slow rate of growth. The patient notices a swelling which is painless. Later syncope, hoarseness, and dysphagia may be caused by pressure of the tumor ou adjacent structures.

The treatment of choice iu this type of tumors is surgical removal. However, this should be done ouly when operation does not eudanger the patient's life. The feasibility or removal of carotid body tumors depends on the relation and adherence of the tumor to the carotid vessels, uamely, the common, iuternal and external. The mortality following litgation of the commou or internal carotid arteries, combining all age groups, carries a mortality of above 30 per ceut. One author has placed the percentage of cases in which the brain is affected following ligation of the common carotid artery at 54.5. Another author states that cerebral manifestations occur in ouly 20 to 25 per cent. Ligation of the external carotid artery can usually be accomplished without danger. With these criteria in mind it seems best to remove only those tumors which can be dissected out without the necessity of ligating the common or internal carotid arteries. Unfortunately, the necessity for ligation of either of these arteries cannot always be foreseen aud often such a procedure is carried out as the onlv means of coutrolling hemorrhage. If it is determined at the onset of the dissection that the tumor cannot be removed without sacrificing either of these arteries, the procedure should be discontinued and the tumor treated conservativelv.

Bevan and McCarthy reported a case as cured by the use of x-ray therapy. As yet this form of treatment has not been tried sufficiently for an opinion to be formed as to its value.

The authors in this article report three cases of carotid body tumors. In two cases the condition was bilateral. In one of the cases of bilateral carotid body tumors the presence of a familial tendeucy is suggested. The mortality rate in their three cases was 33.3 per ceut.

LeRoy D. Long.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
911 Medical Arts Building, Tulsa

"Familial Primary Glaucoma In Adults." Allan H. Briggs, Lincoln. The British Journal of Ophthalmology, October, 1939.

This interesting article is summarized by the author as follows:

A survey of the scanty literature shows that familial glaucoma—a condition distinct from buphthalmia—appears to be a definite entity although comparatively rare. All forms of glaucoma may occur in affected families, but the chrouic simple type seems to be the most frequent. The condition is transmitted by both sexes, and may involve several generations. There is some tendency to "anticipation" in succeeding generatious. The sexes are about equally affected, males being slightly more commonly affected than females. The mechanism by which the hereditary influence acts is uukuown; defective development of the angle of the anterior chamber seems to be the most probable means, but the statistics suggest that the determining causes of buphthalmia, hereditary glaucoma, and non-hereditary glaucoma are separate and distinct. There seems to be no association between hereditary primary glaucoma and buphthalmia. There is little evidence to support the suggestion that hereditary glaucoma is due to some degree of congenital microphthalmia with a disproportionately large lens.

Two glaucomatous families are described. The first family was probably affected through three generatious, but no cases have yet been discovered in the fourth, although, curiously enough, several members of the fourth geueration have defective sight; found to be suffering from quite unrelated eye disorders and to show no sign of glaucoma.

Of the third generation, of eleveu legitimate childrea, two died iu infancy; of the remaining nine, three were certainly glaucomatous and two more suffered from eye defects which were very probably glaucoma; two more had defective sight which may have been due to glaucoma, and two were unaffected. One of the two unaffected members died at the age of 24—too young for her conditiou to be certain.

One member of this family developed a spontaneous choroidal detachment about three months after sclerocorneal trephining, and this persisted unchanged for a year. It was (unsuccessfully) treated by a cautery puncture and is still present.

The second family comprises six siblings out of a family of ten, one of whom died in infancy. Of the nine living siblings, eight are said to be glaucomatous, and six have been examined. Of these five were glaucomatous, and one was unaffected.

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tions and the Superiosteal Method." I. E. Matis, Kaunas. The Journal of Laryngology and Otology, November, 1939.

This is an article about twenty pages in length, beautifully illustrated, starting with a historical survey of the subject and tracing the procedure on down to the present day. Naturally there is quite a bibliography appended.

The fundamental features of the modern external conservative operation are as follows: (1) A small incision in the mesial wall of the orbit. (2) The removal of the sinus floor. (3) Radical ethmoidectomy. (4) Good communication between the frontal sinus and the nasal cavity by removing the descending process of the superior maxilla.

A. Lowndes-Yates says: "I believe that invisibility of the scar is as important to us as to our patients, for women frequently are unwilling to submit to an external operation."

The author's own summary is as follows:

The subperiosteal method, although carried out by another technique and intranasally, has much in common with the principles of the modern external fronto-ethmoidal method as developed by Mr. W. Howarth. By removing the sinus floor, the nasal process of the frontal bone, the ascending process of the superior maxilla and the ethmoidal cells, a cavity results which is one with the frontal sinus and draining this into the nose by a large new channel. This is attained as follows: A curved incision is made along the border of the pyriform aperture. The soft tissue covering the corresponding half of the nose and upper wall of the orbit are elevated subperiosteally and retracted with special hooks until the floor of the frontal sinus is quite free. A flap of muco-periosteum is formed by carrying an incision from the fronto-anterior parts of the lateral nasal wall. The ascending process of the superior maxilla is removed. The exploratory opening of the sinus floor is made above the fronto-maxillary suture. The cavity of the sinus is then directly inspected. When findings are positive, the sinus floor is removed. The removal of the sinus mucosa depends on circumstances. In many cases the Howarth idea of preserving parts of the mucous membrane can be followed. The resection of the frontal process gives a good approach to all the ethmoidal cells which can be radically removed. If necessary, the sphenoidal sinus can be widely opened. In cases of pansinusitis the maxillary sinus can be operated on by this same approach.

The practical results of this operative method based on 105 cases have been very satisfactory. Only a brief description of the various modifications employed by the author is given here.

"Bacteriaemia Following Tonsillectomy." S. D. Elliott, M. B. Lond., D. P. H. University of Cambridge. The Lancet, September 9, 1939.

The author cites the attempts in the last ten years to determine the frequency of this condition following operation. There is a marked lack of agreement in the recorded observation. The latent danger of infected tonsils is brought out forcibly in this article. Blood cultures from the tonsils, as well as before and after tonsillectomies is discussed.

"In most of the patients who underwent tonsillectomy during the morning the temperature rose to 99°-100°F. by the evening but had fallen again to the pre-operative level twenty-four hours later. The occurrence and degree of pyrexia was not found to bear any obvious relationship to the existence of a demonstrable bacteriaemia or to the presence of any particular kind of organism in the bloodstream after operation. The blood was not examined for bacteria during the pyrexial period, but a similar rise in temperature had been observed in patients after dental extractions, when samples of blood taken at this time—i.e., four to nine hours after operation—had always proved to be sterile."

The author's summary is as follows:

(1) A transient bacteriaemia has been observed in 38 out of 100 patients within a few minutes of tonsillectomy. (2) Bacteria were found in the blood regardless of whether the tonsils were removed by blunt guillotine or dissection. (3) The organisms isolated included Str. pyogenes, Str. viridans, Str. pneumonioe, Hoemophilus influenzoe, staphylococcus, and corynebacterium. (4) Serological matches for Str. pyogenes recovered from the blood were isolated from the corresponding tonsils after their removal. (5) Haemolytic streptococci were recovered from the tonsils of 87 out of 137 patients undergoing tonsillectomy (64 per cent). (6) Of 44 cultures of streptococci so isolated and examined serologically 39 (86 per cent.) belonged to group A, 1 to group B, and 1 to group C (Lancefield). (7) The evidence for the common occurrence of transient bacteriaemias in man and animals and the possible bearing of these observations on the aetiology of subacute infective endocarditis are briefly discussed.

"Short Wave Diathermy In Treatment of Nasal Sinusitis." A. R. Hollender, M. D., Miami Beach, Fla. Archives of Otolaryngology, November, 1939.

Hollender is really the original investigator in this line of work. His summary of the present article is:

1. The introduction of short wave diathermy has led to a more general utilization of heat therapy in the management of inflammatory processes.

2. Local deep heating of the anatomic areas in which the sinuses are situated produces analgesia through hyperemia and hyperlymphia, improves tissue metabolism, increases resorption and consequently brings about a more rapid defensive response to infection.

3. Proper selection of cases is one of the primary prerequisites for the scientific utilization of short wave diathermy as a therapeutic agent in cases of nasal sinusitis.

4. Experiments reveal that local tissue temperature is not appreciably elevated, or is elevated only slightly, a fact which is not altogether reconcilable with clinical results, especially in cases of acute sinusitis.

5. Short wave diathermy is not in itself sufficiently effective as a therapeutic agent in acute sinusitis and may occasionally lead to serious consequences when conventional treatment is omitted.

6. Short wave diathermy is an effective therapeutic aid to other procedures in cases of acute maxillary sinusitis, but is practically valueless in the large majority of cases of chronic disease of the maxillary sinus.

PLASTIC SURGERY

Edited by George H. Kimball, M. D., F. A. C. S
912 Medical Arts Building, Oklahoma City

"Sweating Function of Transplanted Skin." Herbert Conway, M. D., F. A. C. S., New York, S. G. & O., December, 1939.

This article is the result of a survey of 75 cases of transplanted skin or skin grafts both free and pedunculated with special reference to the function of sweating with its time of return. The author has noticed several articles with reference to regeneration of sensation of transplanted skin ranging from 1937 but called attention to the fact that he has seen only two references in the literature concerning the sweating function of transplanted skin. Both of these merely referred to the sweat function. The sweat tests in this article were made in 15 cases of pinch grafting, 22 cases of thin split grafts, and 15 cases of thick intermediate grafts, 15 full thickness grafts and 8 pedicle flaps.

The method of his observation is given. Results of the tests briefly: There was no appreciable sweating in pinch grafts, practically no sweating observed in the intermediate grafts of either the thin or thick variety. There was sweating in nine of the fifteen whole thickness grafts and the sweating function was observed to some extent in all of the pedicle grafts.

From this summary the author is able to conclude that the reestablishment of the sweating function depends first upon sudoriparous glands in the transplant. He states that this gives no information as to the question on whether or not sympathetic nerve fibres are

existant or must precede the establishment of sweating function.

Comment: This study is interesting, gives some information as to the function of transplanted skin. It would seem that skin to function normally must be transplanted either in its entirety or must be transplanted in connection with subcutaneous tissue and must be laid in a suitable bed.

"Calibrated Intermediate Skin Grafts." Earl C. Padgett, M. D., F. A. C. S., Kansas City, Mo.

The author has two purposes in his paper: First, to emphasize the advantage of the intermediate skin graft and, second, to present a method by which skin may be cut at a predetermind depth. He states that the pertinent properties of the thin intermediate skin grafts are those which would be done with ease; they may be done on granulating surfaces as old burns fairly early with a relatively high percentage of take. Their disadvantages are that they have a somewhat unsightly appearance in that they never have quite the color and thickness of the surrounding tissues, they are prone to contract and not stand trauma or weight bearing well.

The main advantage of the full thickness skin graft, after a perfect take can be obtained is that it gives a surface which matches the color and thickness with the surrounding tissues and stands ordinary wear. However the period of damage is markedly prolonged.

The author believes that this same purpose can be accomplished with a thick intermediate graft if this graft is cut to approximately within 90 to 95 per cent of the skin thickness uniformly. He also believes that the donor area from which these thick grafts are cut will heal by primary intention in ten to fourteen days, this being of decided advantage.

To cut the above grafts to a known predetermined depth and to do this uniformly, the author in conjunction with a mechanical engineer had devised an apparatus, the dermatome, to accomplish this purpose.

The dermatome is a drum-like apparatus on which is carried a knife. The knife operates at a fixed level from the drum and has a mechanism for calibrating this distance. By applying adherent cement to the drum which is used to pick up the skin, the knife will split the skin at a pre-determined percentage. This apparatus is described fully and adequately illustrated in the article.

Histological studies are given of various thickness, grafts cut both with the dermatome and a scalpel. Normal thickness of skin are given for various types of individuals and percentages of skin thickness for the various types of grafts used with measurements of these thicknesses.

Several case reports are included which are fully illustrated. In the author's own words the paper is splendidly summarized and concluded: To recapitulate, the deep intermediate skin graft as cut with the dermatome is comparatively certain to "take." The new graft shows practically no blisters or local areas of necrosis. It may be cut to pattern if one desires. The ultimate contraction is reduced to a minimum. Good protection is offered. The appearance as a rule approaches that of normal skin. The donor area heals quickly. The post-operative period of care is relatively short. Finally, as a rule, the usual run of lesions may be corrected in one operation.

The properties of skin grafts in general are summarized. The development of the dermatome has removed many of the mechanical difficulties of cutting a skin graft of the needed size and correct thickness. Microscopic examination of the thickness of the average graft as cut by various methods suggests a more accurate reclassification as to thickness. It is now possible to use grafts in certain cases in which formerly a successful result was sometimes not possible to obtain.

A deep intermediate skin graft, which has advantages over the full thickness skin graft, cut at a level ordinarily not possible before the development of the dermatome is described."

Conclusions: Dr. Padgett has given an excellent resume of the use of free skin grafts and summarized their merits and disadvantages. He has described a machine which he has developed with which he is able to cut intermediate skin grafts at any desired depth and does this uniformly. He has pointed out that a deep intermediate skin graft has certain advantages over a full thickness graft and accomplishes practically the same purpose.

We believe that this instrument will be a definite advantage in the use of free transplanted skin.

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D., F. A. C. S.
605 N. W. 10th, Oklahoma City

"The Methods Used in Handling the Epidemic of Poliomyelitis in Ontario in 1937." A. B. LeMesurier, M. B. Toronto, Journal Bone and Joint Surgery, Vol. XXI, No. 4, October, 1939.

The author describes the methods used in an epidemic in 1937 in Ontario, Canada. There were 2544 cases reported. The cases were scattered throughout the entire Province; one third being in the city of Toronto and the remainder in the country districts. The Provincial Department of Health took charge of the care at the time of the epidemic and sent out plans to the physicians over the Province, so that each doctor was equipped, at least with literature, to assist in the care of these cases. In addition, a group of children were sprayed in the olfactory area by the method used recently, but this did not show any reduction in the incidence of poliomyelitis. Convalescent serum was given in practically every case when the diagnosis was made before paralysis occurred. This was given intramuscularly in doses of fifty cubic centimeters. The serum was distributed by the Department of Health. The general impression was that it was of no value in reducing the paralysis.

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(Continued from Page 25)

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February 5	Miami	Ottawa
February 6	Vinita	Craig
February 7	Claremore	Rogers
Februray 8	Bartlesville	Washington
February 9	Tulsa	Tulsa
February 12	Henryetta	Okmulgee
February 13	Muskogee	Muskogee
February 14	Tahlequah	Cherokee
February 15	Poteau	LeFlore
February 16	McAlester	Pittsburg
February 19	Hugo	Choctaw
February 20	Durant	Bryan
February 21	Ardmore	Carter
February 22	Pauls Valley	Garvin
February 23	Ada	Pontotoc
February 26	Seminole	Seminole
February 27	Shawnee	Pottawatomie
February 28	Norman	Cleveland
February 29	Chickasha	Grady
March 1	El Reno	Canadian
March 4	Chandler	Lincoln
March 5	Bristow	Creek
March 6	Stillwater	Payne
March 7	Pawhuska	Osage
March 8	Ponca City	Kay
March 11	Enid	Garfield
March 12	Alva	Woods
March 13	Hooker	Texas
March 14	Woodward	Woodward
March 15	Clinton	Custer
March 18	Sayre	Beckham
March 19	Hollis	Harmon
March 20	Frederick	Tillman
March 21	Hobart	Kiowa
March 22	Lawton	Comanche
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Boards of officers will convene in cities throughout the United States. Full information and application blanks will be furnished on request addressed to the Adjutant General, War Department, Washington, D. C. Applications will not be considered if received in the War Department after March 2.

Obstetrics Board Announces Examinations

The American Board of Obstetrics and Gynecology announces that the general oral and pathologic examinations (part II) for all candidates (groups A and B) will be conducted by the entire board in Atlantic City, N. J., June 8-11, immediately prior to the annual session of the American Medical Association.

Application for admission to group A, part II, must be on file in the secretary's office not later than March 15. Formal notice of the time and place of the examinations will be sent to each candidate. For further information and application blanks, address Dr. Paul Titus, secretary, 1015 Highland Building, Pittsburgh.

Francis Amory Prize

The American Academy of Arts and Sciences, as trustees of a fund given by the late Francis Amory, directs attention to the Francis Amory Septennial Prize which is to be awarded in 1940. The award will be made for conspicuously meritorious work in the past seven years "through experiment, study or otherwise, in the treatment and cure of diseases and derangement of the human sexual generative organs in general and more especially for the cure, prevention, or relief of the retention of urine, cystitis, prostatitis, etc."

While the donor wished to reward the discovery of any new method of treatment, he expressly authorized that the prize might be given to any author who might have contributed any theoretical or practical treatise of extraordinary or exceptional value and merit on the anatomy of these organs or the treatment of their diseases.

The 1940 award, which will be the first, will exceed $10,000 and may be divided at the discretion of the academy among several nominees. Communications on the subject should reach the committee not later than May 15 and should be addressed in care of the American Academy of Arts and Sciences, 28 Newbury Street, Boston.

Dr. Walker Morledge, chief of staff at Oklahoma City General Hospital delivered a series of eight lectures at a seminar sponsored by the King County Medical Society of Washington in late December.

At the December meeting of the Seventh Congressional District Medical Society in Hobart, Dr. E. Paulson of Clinton was elected president for 1940, Dr. Harry Cushman of Clinton vice-president, and Dr. William Finch of Hobart secretary-treasurer and program committee chairman. Speakers at the meeting were Dr. J. F. Kuhn, Dr. W. F. Keller and Dr. Rex Bolend, all of Oklahoma City. The next quarterly meeting will be held in March at Clinton.

From the office of Dr. Grady F. Mathews, state commissioner of health, the following county health superintendents have been appointed: Choctaw county, Dr. H. R. Anderson of Hugo; Okfuskee county, Dr. C. M. Bloss, Jr., of Okemah, acting.

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*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

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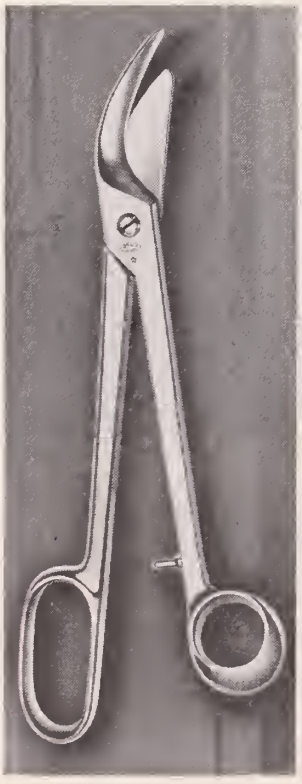


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THE Journal

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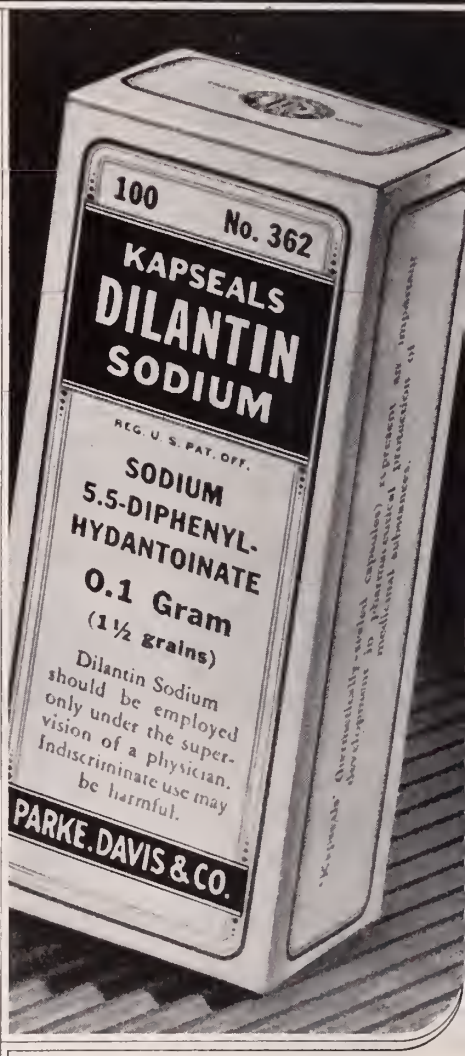
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THE JOURNAL
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OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME XXXIII OKLAHOMA CITY, OKLAHOMA, FEBRUARY, 1940 Number 2

Petrositis*

THEODORE G. WAILS, M.D.
OKLAHOMA CITY, OKLA.

The literature on this subject is available to everyone, and since my subject was not limited to any particular phase, I will confine this paper to my own experience with diagnosis, operations, results and the conclusions I have reached as a result of managing a few cases of petrositis.

My first acquaintance with this subject began in 1927, when papers began to appear on Gradenigo's syndrone; i. e. pain behind the eye and paralysis of the corresponding sixth nerve, following or coincident with suppurative otitis media.

The pain behind the eye was explained by irritation of the gasserian ganglion and the paralysis of the sixth nerve by a periostitis of the petrous portion of the temporal bone pinching the nerve. These being necessary for the diagnosis of petrositis.

Since it is possible that some of you may have become a little uncertain about the anatomy of this region I will recall some of the surgical landmarks to your attention.

The petrous pyramid is roughly a three sided pyramid with base laying toward the middle ear, and the apex approaching the opposite apex in the mid line. It articulates with the occipital bone below and behind and with the greater wing of the sphenoid anteriorly.

The superior petrosal sinus runs along the top side and the inferior petrosal sinus runs below, joining the lateral and sigmoid sinuses and the jugular bulb with the cavernous sinus anteriorly.

The surfaces of the pyramid, three in number, face superio-posteriorly, superior-anteriorly and inferiorly. The tentorium runs along the superior-posterior edge dividing the middle fossae from the cerebellar. This accounts for the fact that if the cells along the posterior edge are infected, the pus spreads to the cerebellar fossa, while if those in the front side are infected the pus spreads to the middle fossae.

The gasserian ganglion lies in front and a periostitis of the anterior cells is apt to produce irritation of this ganglion and pain behind the eye.

The sixth nerve emerging from the lower border of the pons runs forward across the sharp superior edge and is likely to be pinched by a periostitis in this region.

The greater superficial petrosal branch of the seventh nerve emerging through a foramen on the anterior side and joining the great deep petrosal to make the nerve of the pterygoid canal and eventually part of the spheno-palatine ganglion is also likely to be affected, and according to Towson, of Philadelphia, is the real cause of the pain behind the eye rather than irritation of the Gasserian ganglion.

The internal carotid artery indents the anterior surface, and therefore, infection along the anterior side lies in close relation to this artery and the Eustachian tube.

Abscesses in this region may also rupture downward into the pharynx, rather than into the cranial fossae.

The cellular structure of the pyramid is the factor that determines the type of infection rather than the organism itself.

*Read before the Section on Eye, Ear, Nose and Throat, Annual Meeting, Oklahoma State Medical Association, May 3, 1939, Oklahoma City.

The pyramid in its development has a red marrow-like structure like long bones, and may have an actual osteomyelitis, rather than the osteitis of the mastoid. For this region one may be able to eradicate infection there by puncturing a tip cell in the apex rather than by complete removal as is necessary in the mastoid.

The internal auditory meatus admitting the seventh and eighth nerves intermedius is in relation with the posterior surface. So when there is also diffuse labyrinthitis either latent or manifest, there is considerable danger of posterior fossae meningitis or brain abscess.

The ductus endolymphaticus of the vestibular system also enters the posterior fossae, while the ductus cochlearis enters the middle fossae, accounting for meningitis in the cerebrum following purulent labyrinthitis.

It must be remembered with the base of the pyramid directed externally, there is plenty of room for cellular structure posterior to the semi-circular canals, and also anterior and inferior to the cochlea. When diseased bone is found leading inward past the semi-circular canals, the dura may be lifted and the cellular structure removed, sheletonizing the posterior and horizontal canals, and pus may be drained forward into the mastoid wound without opening the labyrinth.

In fact, in doing a thorough simple mastoidectomy, this happens much more often than we think. These are really petrositis infections that have not progressed to the tip cells. Therefore one does not necessarily need to have halisteresis and Gradenigo syndrome and meningeal symptoms to have a petrositis.

In 1927 one of the nurses at University Hospital developed a low grade streptococcic acute otitis media. The drum was opened because of redness, fever, pain and impaired hearing, but no bulging. There was very little discharge and no relief from symptoms. Hot irrigations, suction, anti-streplococcic serum and supportive treatment did not improve the condition. After about one week of this X-Ray showed a cloudy mastoid, but no breaking down. Simple left mastoidectomy was done. A typical streptococcic hemorrhagic mastoiditis was found. During the next week she continued to have fever, pain behind the left eye and headaches, but no ocular palsies.

Spinal puncture showed increase in globulin and a large number of polys but no bacteria. Petrositis was considered, but on account of no sixth nerve paralysis and nothing definite by X-Ray, we thought she had a circumscribed basilar meningitis or abscess.

It was reoperated and the dura raised from the posterior surface and a search made for extra dural abscess and subdural abscess and nothing certain was found. She died three days later, and autopsy showed basilar meningitis and a large apicol abscess in the pertous tip. Perforation of this tip with a hook at the second operation would probably have saved her life.

The next case recognized was a six-year-old colored girl, seen in the clinic. The parents had left her there and there was no history. Examination showed both ears discharging profusely and temperature 104 degrees. She could not hear any sound with either ear. She had perverted spontaneous irregular nystagmus. She also had paralysis of both sixth nerves. She was practically comatose and was vomiting and had positive Kernig and ankle clonus. Spinal puncture was done and greatly increased number of cells and streptococcic were found in the spinal fluid.

Diagnosis was made of bilateral acute mastoiditis, acute diffuse manifest purulent labyrinthitis, acute petrositis and acute diffuse meningitis. These diagnosis were confirmed at autopsy.

Eagleton had in 1929 come out with his article on unlocking the petrosis pyramid, and there has followed many variations of the surgical approach by Kopetsky, Lempert and others.

The consensus of opinion seems to be, and my own experience has been that complete mastoidectomy, Whiting type, removing everything down to the inner table with especial care in Trautman's triangle and to the region above, anterior to and medial to the antrum will eradicate all the petrous infection cases that have not progressed inward past the inner ear and infected the apex cells. We have had three or four of these cases which we recognized at the time and probably several not recognized, that made uneventful recoveries on a complete simple mastoid operation.

The next apex case diagnosed was a woman at University Hospital, about fifty years old, with an acute mastoiditis incompletely operated elsewhere. Because of meningeal symptoms and a dead labyrinth, she was kept on spinal punctures and supportive treatment until her manifest diffuse acute purulent labyrinthitis had become latent. X-Rays showed considerable halisteresis in the petrous portion. This is best seen in my opinion by pictures made in Stenver's position, with the petrous portion showing through the orbit. Meantime she had developed a sixth, seventh, eighth, ninth and tenth nerve paralysis, meningeal irritation, but no evidence of an expanding lesion in the brain (abscess). She also had a labyrinth that could not be stimulated and no hearing in that ear.

Radical mastoidectomy was done, then the dura raised inward above the internal auditory meatus, the semi-circular canals were sheletorized and the posterior superior petrous cells removed inward toward the tip. Some pus and adhesions were encountered toward the apex. We could not perforate the apex with a hook as suggested by Eagleton in his unlocking operation. Since the labyrinthitis was latent, we then went back to the middle ear, lifted the seventh nerve out of its groove and punctured the promontory after the manner of Hinsberg and proceeded to exenterate the cochlea and going forward and inward along the back side of the internal caratid artery the tip was reached and a drain put into the apex. A flat rubber drain was placed beneath the dura and posterior surface to drain the extra dural abscess found there. The woman made a slow but continuous recovery, and should regain the use of all nerves except the eighth and seventh. I have not seen her in two years.

CONCLUSIONS REACHED

1. A complete simple mastoidectomy will eliminate most cases if done early.
2. The petrous tip should be reached along the posterior superior surface if the inner ear is not infected.
3. If infected, the apex may be reached through the cochlear portion when the labyrinthitis has become latent.
4. The sixth nerve involvement of Gradenigo's symptoms may not be present, and if so indicates a late case.
5. Halisteresis or loss of calcium salts in the tip comes late.
6. An acute mastoid completely operated that continues to run fever after two weeks post-operative should be examined carefully for suppuration of the apex of the petrous pyramid.

Gout (Metabolic Arthritis)*

E. GOLDFAIN, M.D.
OKLAHOMA CITY, OKLA.

A disease often not promptly recognized, due to its relative rareness in this part of the country, is that of the metabolic disturbance known as gout. Gout is a chronic anomaly of the purine metabolism in which blood and tissue fluid uric acid is increased. Clinically it is characterized by acute attacks due to the specific irritating effect of sodium monourate deposition in and about the joints.

Two forms of gout are often noted, designated as regular or acute and irregular or chronic. Acute gout is characterized by severe recurrent attacks associated with arthritis, often appearing in a person of good health, with intervals between attacks being months or years. The intervals between attacks decrease gradually as the disease runs its course. Chronic gout manifests itself by the presence of permanent deformity and crippling of the joints. There will be mild frequent recurring attacks of arthritis or a more or less constant state of arthritis. Chronic interstitial nephritis will often be present in chronic gout.

Gout may also be listed as primary or secondary. Primary gout will reveal no nephritic disease and is apparently due to an inherited constitutional tendency. Secondary gout usually appears in cases in which chronic nephritis is already present at the time of the first attack.

The exact cause of gout is as yet unknown. The role of uric acid in gout is not well understood. Uric acid is a normal blood constituent. It appears that the excretory power of the organism in respect to uric acid is impaired in practically all cases of gout. Predisposing factors, aside from hereditary predisposition, in the causation of gout, are excess alcoholic ingestion, over-eating, long continued mild chronic lead poisoning, and a sedentary form of living.

Gout often appears in the latter half of a person's lifetime. Males are much more frequently affected than females, it being rather rare in females.

There seems to be a geographical distribution in respect to gout, it being known to occur more often in Germany, England and Holland, exactly where the drinking of malt and wine liquors is most common and where the climate is unfavorable.

The pathologic anatomy is due to deposition of sodium monourate either in the synovial fluid or membranes, or at times in the epiphysis or cartilage of bones forming the joint. It may also be deposited in bursae, tendon sheaths, and in the periosteum. Deposition of uric acid in cartilage is quite fre-

*Read before the Section on General Medicine, Annual Meeting, Oklahoma State Medical Association, Oklahoma City, May, 1939.

quent. Under the microscope it reveals itself as long, crystalline needles. The uric acid crystals may cause necrosis. They can be re-absorbed following their deposition. In chronic gout re-absorption does not occur. Chalky-like deposits remain when complete crystallization has ensued.

Presence of tophi in subcutaneous, fibrous, and fibro-cartilagenous tissues is a characteristic finding in chronic cases.

A typical case of acute gout, when the physician is more or less alert in respect to its presence, is quite characteristic. Diagnosis from a clinical standpoint is not difficult. Often it occurs suddenly without premonitory symptoms, usually during the night. At



Fig. 1 (Case 1). Note defect shadows in terminal end of each first metatarsal bone.

times there may be prodromal symptoms, such as loss of appetite, gas eructations, diarrhea, constipation, and cramps in the calves of the legs. Sydenham, himself a sufferer, has described gout in such accurate fashion that his description even to the present day is an excellent word picture of what occurs during an attack. As a rule, but not always, the right or left big toe joint will be affected during the first attack. Pain, swell-



Fig. 2 (Case 1). Note disappearance of defect shadows a year later.



Fig. 3 (Case 2). Note defect shadows arrows point to, caused by urate desposits.

ing, some fever, may occur during the first night. This localized pain will recede as the dawn appears and reappear during the second night. Gradually over a period of a week to ten days the attack resolves itself and the patient seemingly returns to a normal state of health. The joints of the lower extremity are most often affected; also the tendons of the lower extremities will more often be affected. Lumbago and muscular cramps of the calf muscles are often present.

From a laboratory standpoint we find that there may be a white blood cell count often



Fig. 4 (Case 3). X-ray of feet. Note defect shadows in big toes and destruction of joint caused by urate deposits.

as high as 20,000. As a rule the blood uric acid is elevated above 5.0 mgm. per 100 cc. of blood. It may run up to 9.0 or 10.0 mgm. per 100 cc. of blood. During an acute attack the amount of blood uric acid is often less than it is between attacks. Excretion of uric acid occurs at a heightened rate at such time. Urinary uric acid output may often drop before an attack, increases during the attack, and then decreases. It is quite likely that the febrile condition during an acute attack helps to increase uric acid elimination. Experiments have shown that a

case of gout will eliminate a definite quantity of ingested uric acid over a longer period of time than the normal case. This indicates that the elimination of uric acid, rather than a disturbance in its formation, is an important factor in the genesis of gout.

Chronic gout, as a rule, is a terminal part of regular or acute gout. It may be chronic from the start. Permanent deformity and disability of involved joints plus frequently occurring or constant arthritis characterize it. In contradistinction to acute gout, joints of the upper extremities are more often affected than those of the lower.

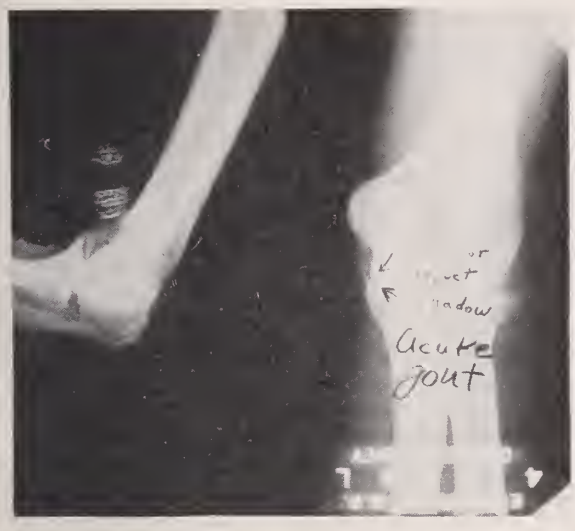


Fig. 5 (Case 3). X-ray left elbow. Arrows point to defect shadow caused by urate deposits.

Deposits of uric acid crystals in the cartilages, bursae, and ligamentous tissues in and about joints are very common, as well as tophi in the subcutaneous tissues and muscular aponeuroses. Because of the superficial location of some of these tophi, ulcerations and sinuses may occur. Tophi often occur late in the disease, usually ten years after the initial attack.

Defect shadows in the bones and atrophic changes of the bones together with exostoses are often present. They may resemble defect shadows in the bones of chronic arthritis. However, defect shadows in chronic arthritis usually are smaller and more sharply circumscribed than those in gout.

To make a diagnosis of gout one should obtain a characteristic history; look for defect shadows in the X-rayed joint; and obtain as a rule an increased amount of blood uric acid. The patient usually is of the florid, somewhat obese type. He often gives a history of over-eating and over-ingestion of alcoholic stimulants. Important from a laboratory standpoint is the presence of a high uric acid with a normal amount of non-protein nitrogen in the blood.

* * *

CASE 1. Patient develops attacks of severe pain localized to one or more joints at irregular intervals with localized swelling, redness, and some temperature during the first twenty-four hours. Pain usually begins at night. The big toe joints were first involved. He is a heavy eater and markedly overweight. There is no family history of gout. Blood uric acid 9.3 mgm. Blood non-protein nitrogen 42.5 mgm.

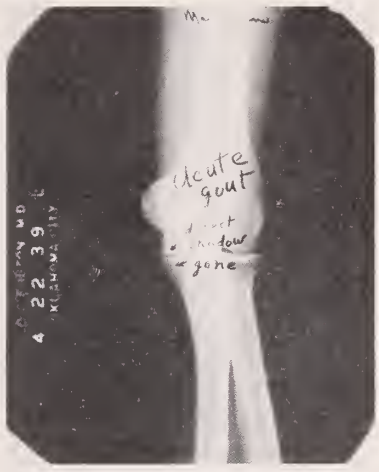


Fig. 6 (Case 3). X-ray left elbow showing disappearance of defect shadow after the acute attack.

* * *

CASE 2. This patient developed sudden severe localized pain associated with swelling, redness, and some temperature. The pain began at night. It was quite bad the first night. Swelling was limited to the big toe joints. Patient is a heavy eater and drinker and also overweight.

* * *

CASE 3. Patient, for seven years, has had recurrent acute attacks of pain, swelling, and localized redness, lasting about ten days. These would entirely disappear. Swellings were at first localized in either one of the big toe joints. Later swellings have appeared in other joints. The attacks have been appearing frequently lately.

* * *

References:

All standard books on practice of medicine, and both loose-leaf systems of medicine.

The Chemotherapy of Infectious Diseases*

LEWELLYS F. BARKER, M.D.
BALTIMORE, MD.

HISTORICAL NOTE

Attempts to treat diseases by chemical agents have been made by physicians since the very earliest times. In ancient Egypt drug prescriptions were used to treat all kinds of ailments, though, as we now know, this chemotherapy was based chiefly upon guess-work.

In some instances, doctors hit upon chemical agents that were valuable in treatment. Thus, mercurial ointments were used in China as early as 1100 B. C., but whether as a remedy for syphilis or not, no one seems to be sure. Certainly early in the 16th century, mercurial ointment was found to be valuable in the treatment of syphilis in Europe.

In the 17th century, Peruvian bark (which contains quinine) was found to be valuable in the treatment of malaria; the first European to be thus treated was the Countess of Chinchon who was in Lima and, since then, Peruvian bark has been known as "cinchona bark."

In Brazil, ipecac was much used by the natives in the treatment of dysentery and in 1672 began to be used in France, the secret composition of the remedy being purchased later by Louis XIV's government for 1000 louis d'or so that after 1688 it was available to the general public.

It was not, however, until after the sciences of organic chemistry and bacteriology underwent their great development in the nineteenth and twentieth centuries that chemotherapy could be established upon a more rational basis through clinical observation and experimentation. This modern chemotherapy achieved its first great success as a result of the road-breaking experiments of Paul Ehrlich who set out systematically to test a great variety of components of arsenic in the hope of finding one that would cure syphilis rapidly. After testing no less than 605 different arsenicals, he finally in 1910, hit, in the 606th preparation, upon "salvarsan" (now called "arsphenamine") which could be given with comparative safety to patients and yet was markedly poisonous to the infectious agent *Treponema pallidum* that causes syphilis.

A little later, the value of chaulmoogra oil for the specific treatment of leprosy, an endemic scourge known to be prevalent in Egypt since 1500 B. C. and since widespread in all continents, was determined. The cause of leprosy, the *Bacillus leprae*, was discovered by Hansen in 1871.

But the greatest triumphs in the field of chemotherapy have been achieved during the past four or five years since Domagk in Germany began to treat certain infections with prontosil (the active constituent of which is sulfanilamide). A whole series of similar compounds have been experimented with, but the two most valuable in practice are sulfanilamide and sulfapyridine, the effects of which I shall soon describe in more detail.

That man's long tedious search for chemical substances that will help destroy infectious agents without serious injury to the human body itself should have been so successful is matter for the deepest congratulation. Those "magic bullets" (as D. B. Armstrong calls them) can now be cautiously shot into the human body with the most gratifying results in a whole series of infectious processes. Medicine, today, has to thank chemotherapy for some of its most significant advances.

MALARIAL INFECTIONS

Since Laveran's demonstration of certain protozoan parasites (plasmodia) in the blood of malarial patients, our knowledge of the disease has made great strides. These parasites show an alternation of generations, the asexual propagation (schizogony) being carried on in the blood of the intermediate host (man), the sexual propagation (gamogony or sporogony) being carried on largely in the gastrointestinal canal of the definitive host (mosquito).

Benign tertian malaria is due to *Plasmodium vivax*, quartan malaria to *Plasmodium malariae* and malignant tertian malaria to *Plasmodium falciparum*. Of these three species, each may occur in more than one "strain" and the biological susceptibility of a parasite to the action of drugs may vary with different strains, so that from the chemotherapeutic point of view strains may perhaps be as important as species (James, 1932). *Quinine Treatment.*—In benign tertian malaria (*P. vivax*), 1 gm. daily for sev-

*Read by invitation before the Post-Graduate Assembly of the Oklahoma City Clinical Society, Nov. 1st, 1939.

en days will kill off all the asexual forms (trophozoites or schizonts); indeed, on the average, they are no longer demonstrable in the blood after the third day of treatment.

In quartan malaria (*P. malariae*), the same effects are obtained as in benign tertian.

In malignant tertian (*P. falciparum*), 1.3 grm. quinine daily should be given for seven days; it kills off the asexual forms in about four days. In some countries it has been found necessary to give 2 grm. daily to obtain a rapid effect.

Quinine appears to be able to kill the asexual forms (gametocytes) of quartan and benign tertian malaria but has only very slight effect upon the fully developed gametocytes of malignant tertian malaria though it does impede the formation of the pregametocytes of *P. falciparum*.

Relapses are prone to occur after treatment of all three forms of malaria when treated with quinine alone.

So-called *totaquina* is almost as efficacious as quinine in lowering the temperature and in clearing the peripheral blood of malarial parasites when used in ordinary cases of malaria. It costs only about one-seventh the price of quinine, a matter of importance in country in which malaria is widespread. Thus, it has been estimated that in the Philippine Islands alone the market could absorb some thirty-three tons of totaquina (P. E. Russell).

Atebrin (or quinacrine) Treatment.—This drug, given in daily doses of 0.30 grm. (for adults) is very efficacious in the treatment of all forms of malaria. In benign tertian malaria, the asexual forms (trophozoites) will disappear as a rule after three days and the same is true in the treatment of quartan malaria. In the treatment of malignant tertian malaria, atebrin is somewhat more efficacious than quinine, the asexual forms of the parasite disappearing from the peripheral blood after the fourth dose in 90 per cent of the cases.

On the gametocytes, the action of atebrin is similar to that of quinine.

Plasmoquine (or plasmochin) Treatment.—This drug has almost no effect upon the asexual forms of the parasite in malignant tertian malaria, though it may reduce their numbers some in benign tertian and in quartan malaria. But the great advantage of plasmoquine lies in the fact that it has a pronounced effect upon the sexual forms (gametocytes) in all varieties of malaria, including malignant tertian in which the gametocytes are practically unaffected either by quinine or atebrin. The use of this chemical is therefore most important for the prevention of relapses.

When quinine is used, plasmoquine in doses of 0.02 grm. to 0.03 grm., twice a week may be used at the same time; but plasmoquine should not be used simultaneously with atebrin since the toxicity of each of the drugs is aggravated. When atebrin is used (0.30 grm. daily for from five to seven days), it may be followed after cessation of the atebrin treatment by plasmoquine in daily doses of 0.02 grm., for five days.*

Syphilitic Infections

In spite of increase of public education regarding the dangers of venereal infections, syphilis is still far too prevalent; over half a million new cases of syphilis apply yearly in the United States for treatment for the first time, some of them having had syphilis for months or even years before seeking aid. It is unfortunate, too, that four out of five patients treated early in the course of the disease receive less than the minimum amount of therapy necessary to render them non-infectious.

Mercurial Treatment.—For a long time, a series of courses of mercurial ointment (2 to 4 grm. rubbed into the skin six nights weekly for five weeks) supplemented by the use of the iodides represented the standard method of treatment for syphilis and when faithfully carried out over a long enough period gave results that were in general satisfactory. But the use of blue ointment was such an unpleasant procedure that deep intramuscular injections of mercurial salts (e. g., 0.06—0.12 grm. of salicylate of mercury in 10 per cent solution) were in later years much preferred. One injection every five to seven days until thirty injections had been given constituted a course; the courses were repeated for two years or longer with rest-periods of a month between courses.

Combined Arsenical and Bismuth Treatment. — Arsphenamine, neoarsphenamine, tryparsamide, aldarsone, mapharsen and triarsen are the arsenicals now most widely used in the treatment of syphilis. Intravenous injections of neoarsphenamine (0.6 grm. in 300 cc. every five days for six or eight injections, followed by a series of intramuscular injections of bismuth compound, the arsenical and bismuth treatments being alternated as a routine combined treatment until the Wassermann reaction becomes permanently negative are now regarded as most satisfactory.

If syphilis is treated early and thoroughly, the so-called parasyphilitic diseases (tabes dorsalis and dementia paralytica) will be prevented but all too frequently when treatment has been delayed or has been in-

*For a full discussion of the modern treatment of malaria the Fourth General Report of the Malaria Commission of the League of Nations (1937) should be consulted.

sufficiently vigorous these serious diseases are encountered.

In tabes dorsalis (locomotor ataxia), success can be achieved in many cases by the use of combined routine treatment (with twenty intravenous injections of arsphenamine and forty intramuscular injections of a bismuth preparation) along with intraspinal therapy (at least seven intrathecal injections of serum from 50 cc. of blood withdrawn a half hour after intravenous injection of arsphenamine). Excellent clinical results can thus be obtained in about 25 per cent of the cases of tabes, moderately favorable results in about 40 per cent of the cases, less favorable effects in 20 per cent. In at least 10 per cent of the cases, however, the disease is likely to progress clinically no matter what treatment is used.

In dementia paralytica (general paresis) combined routine treatments with arsenicals and bismuth do not suffice, though if these be suplemented by fever therapy (malaria or hypertherm) for ten weekly sessions of five hours each during which a temperature of from 105 degrees to 106 degrees is maintained, mapharsen or bismarsen being injected soon after the fever has reached its maximum height, gratifying results may be obtained. In about one-third of the cases of general paresis advanced enough to require care in psychiatric institution and in about 85 per cent of incipient cases of general paresis so-called "ecomonic remissions" can be secured.

Streptococcal Infections

A whole series of infectious processes met with clinically are due to streptococci, especially hemolytic streptococci. The majority of these are due to the beta hemolytic streptococcus, a smaller proportion of them to the alpha hemolytic streptococcus. Thus erysipelas, scarlet fever, most cases of septic sore throat, acute tonsillitis, acute sinusitis, many cases of otitis media and mastoiditis, cases of hemolytic streptococcal meningitis, many local puerperal infections, puerperal fever (and other forms of hemolytic streptococcus bacteremia), some pleurisies, empyemas and some cases of cystitis and pyelitis have been shown to be due to the beta hemolytic streptococcus. On the other hand, sub-acute bacterial endocarditis is due to the alpha hemolytic streptococcus (*Streptococcus viridans*).

The vast majority of the infections due to beta hemolytic streptococcus can now be cured by the administration of the extraordinary chemical known as sulfanilamide (p-aminobenzensulfonamide). Unfortunately it has but little effect upon infections due to Sterptococcus viridans (alpha hemolytic streptococcus), though an occasional favorable result after the use of prontosil has been reported (cf. Ralph Major).

Though sulfanilamide was synthesized by the organic chemist Gelmo as long ago as 1908, its great value as an anti-streptococcal agent did not become fully recognized until about three years ago. It is true that certain azo derivatives (since shown to contain sulfanilamide) were found to exert an action against streptococci in test-tube experiments and even in mouse septicaemia due to hemolytic streptococci as early as 1909 by Horlein. Investigations under Domagk led to the development of two azo compounds known as prontosil I and prontosil II, both of which yielded favorable results in the treatment of diseases in animals (mice; rabbits) due to beta hemolytic streptococci. From 1932 on, cures of streptococcal infections in man began to be reported from Germany. French investigators in 1935 proved that the active principle in the prontosils was para amino benzene sulfonamide (now known simply as sulfanilamide) and that the azo linkage was unnecessary, a view that was adopted in 1936 by Domagk and since confirmed by all investigators. Intensive research led to the production of about 200 sulfonamide or closely related compounds, but as anti-infectious agents the two that are of the greatest importance are sulfanilamide and sulfapyridine. In America, the works of (1) P. H. Long and E. A. Bliss, and (2) R. R. Mellon, P. Gross and F. B. Cooper in connection with sulfanilamide therapy of bacterial infections have been of outstanding importance.**

When treating any severe infection with sulfanilamide it is important to secure a concentration of from 10 to 15 mgms. of free sulfanilamide in the blood as quickly as possible and to maintain this concentration until the infection is cured. In the majority of patients this can be achieved by oral administration of the chemical. An initial dose by mouth of 0.07 grm. per gilo of body weight (0.6 grains per pound of body weight) of the drug will usually produce a blood-level of 8 to 11 mgms. per cent of free sulfanilamide within four hours. After this initial dose, adults should receive at four-hourly intervals, 1.2 grm. (20 grains) of the drug in order to maintain the desirable blood-concentration.

If the patient is vomiting or comatose, oral administration is of course impracticable and the sulfanilamide should then be given parenterally. In the average adult one injects (by hypodermoclysis) as an initial dose 6 grm. of sulfanilamide (in 600 cc. of a sterile

**cf. Long (P. H.) and Bliss (E. A.) The clinical and experimental use of sulfanilamide, sulfapyridine and allied compounds, N. Y., 1939, MacMillan, 319 pp.; (2) Mellon (R. R.), Gross (P.) and Cooper (F. B.). Sulfanilamide therapy of bacterial infections, Baltimore, 1938, Thomas, 388 pp. (3) Keefer, (C. S.) and others. Symposium on Sulfanilamide. Med. Clinic, N. America, 1939, 23: 1133-1244.

1 per cent physiological salt solution) and follows this at eight-hourly intervals with from 200 to 400 cc. more of the same solution. The fluid intake should be somewhat restricted (not over 3500 cc. daily) since larger amounts of fluid tend to too rapid excretion of the sulfanilamide by the kidneys so that the blood concentration of the drug is reduced below adequate levels. One gives half as much sodium bicarbonate by mouth as the amounts of sulfanilamide used (to prevent acidosis).

When the disease has come fully under control, the amount of sulfanilamide given may be slowly decreased for a week or until the patient is able to be up and about; and after this the treatment may, as a rule, be safely discontinued.

During treatment, no alcohol should be taken, the patient should be kept in bed and saline laxatives and other cathartics should be avoided.

In some patients toxic effects may appear during the administration of sulfanilamide. Though many tolerate the drug well, some complain of headache, dizziness, difficulty of concentration, loss of appetite or even nausea and vomiting.

Most patients taking sulfanilamide become somewhat cyanotic, but the appearance of this symptom is not a contra-indication to the continuance of the treatment.

A few patients will develop a little fever (independent of the fever due to the infection) during the course of the treatment by sulfanilamide, in which even the use of the drug should be temporarily discontinued. Later on, a test dose of 0.3 grm. may be given and if the fever does not recur within 12 hours thereafter the treatment may be continued cautiously.

Mild hemolytic anaemias are very common among patients receiving sulfanilamide but as a rule they develop slowly and are not severe. In a small percentage of the cases, however, especially in children, an acute hemolytic anaemia may develop in from one to three days after the treatment has been started with rapid fall in the red cell count (two million cells within 24 hours) and with some leucocytosis or with leukopenia. In such cases, the drug should be discontinued and a blood transfusion given. In relatively rare instances, marked leukopenias and even agranulocytosis may appear in the course of sulfanilamide therapy, in which event the use of the drug should be immedately stopped, excretion by the kidneys favored by abundant water intake, and blood transfusions given. Practitioners giving sulfanilamide should obviously make it a rule to have complete blood counts made daily during the treatment.

Sulfanilamide is undoubtedly an extremely valuable addition to our therapeutic armamentarium. Indeed its effects are so magical in beta streptococcal and certain other infections that there is danger that it may be used too indiscriminately and thereby come later on into underserved disrepute. It should be used only when need for it is clearly indicated with strict observance of the precautions referred to.

Meningococcal Infections

In meningococcal meningitis and meningococcal septicaemia the results of sulfanilamide therapy are probably as good as those obtained by treatment with anti-meningococcus serum. Oral administration of sulfanilamide is quickly followed by the appearance of the drug in the cerebrospinal fluid so that intrathecal administration may not be necessary. Cultures of the spinal fluid usually become negative after from 1 to 3 days of treatment. In severe cases, however, it may be well to inject a 1 per cent solution into the subarachnoid space by the gravity-flow method. One first withdraws some fluid by lumbar puncture and then injects a smaller amount of the 1 per cent solution than the amount of fluid that has been withdrawn. One may, of course, combine the injection of anti-meningococcus serum with sulfanilamide therapy if desired, though treatment by sulfanilamide alone will usually suffice. If anti-meningococcus serum be used, it should as a rule be given in a large intravenous dose, rather than intrathecally, so as to disturb the patient as little as possible.

Gonococcal Infections

Surprisingly good results have been obtained from the oral administration of sulfanilamide in acute gonorrhoea (if treated early), in gonococcal septicaemia, in gonococcal meningitis, in gonococcal arthritis and in gonococcal opthalmia. The chemical should be used in the same way as in streptococcal infections.

Sulfapyridine seems also to be efficacious in overcoming gonococcal infections. Some give it in ambulatory cases of gonorrhea, but I prefer to keep patients who are taking either sulfanilamide or sulfapyridine at complete rest in bed.

Dimethyl-disulfanilamide, much vaunted in Germany for the treatment of gonococcus infections, is more toxic than sulfanilamide, the remedy of choice in America.

Trachoma

Recent reports indicate that this infectious disease of the eyelids responds well to treatment with sulfanilamide.

Pneumococcal Infections

In the various pneumococcal infections (pneumonia, pneumococcus bronchitis, pneumococcus septicaemia and pneumococcus

meningitis) we have had to depend largely until recently upon the use of specific anti-pneumococcal sera. But there are no less than thirty-two different types of pneumococci and treatment by sera involves typing of the organism and the use of the particular anti-serum indicated. In several types, good results are obtained by specific serum treatment; in other types, the results have been very disappointing.

But now the whole picture is changed. It is even possible that the tedious work of typing may later on become entirely superfluous except for its scientific interest, for the majority of pneumonias and other pneumococcal infections (no matter what type of pneumococcus is concerned in the etiology) can, unless contemporary experience should prove to be illusory, be successfully and speedily overcome by the administration of another sulfonamide compound, namely, sulfapyridine (M & B 693).

In my long clinical experience I cannot recall any greater surprises than those experienced in watching, during this year, the effects of sulfapyridine upon patients suffering from lobar pneumonia. Seeing a man who has suddenly had a chill followed by shortness of breath, pain in one side of the chest, rapid breathing, cough with blood-tinged sputum containing pneumococci, and on physical examination pleural friction and fine crepitant rales—the typical signs of pneumonia, we formerly expected to observe high fever for from five to seven days accompanied by outspoken consolidation of a lobe of the lung, ending too often fatally, though sometimes in recovery after crisis. Now we give an initial dose of 30 grains of sulfapyridine by mouth and follow this by a second dose of 30 grains at the end of four hours, after which 15 grain doses may be given every four hours until at least 135 grains have been given; after this, doses may be given at longer intervals for four or five days. The effects are often simply marvelous—the temperature falls quickly and the other symptoms rapidly clear up. It is not uncommon in the hospital to observe a normal temperature after 24 or 36 hours and to find the patient who has been so very ill, sitting up in bed and asking when he can go home! Certainly the mortality rate can be greatly reduced in lobar pneumonia by the use of sulfapyridine; mortality rates of from 2 to 10 per cent in several series of cases have been reported from various parts of the world. Similar results are observable of the treatment of bronchopneumonias due to the pneumococcus.

In persistent pneumococcus bronchitis without pneumonia the results may be equally striking. If you will pardon a personal reference, I may tell you that winter before last I was compelled to remain in bed for over three months with purulent bronchitis due to the pneumococcus (type XVIII), despite good nursing, inhalations, and treatment by diathermy. On recovery, I was given pneumococcus vaccines in the hope of preventing further attacks. But last winter I suddenly began to expectorate purulent sputum again and wondered if I were in for another long siege of the malady. Thanks to Perrin H. Long, however, I secured some tablets of sulfapyridine and after the second day the sputum ceased to be purulent! In persons with recurring pneumococcus infections, Felton's vaccine would seem to be well worthy of trial as a prophylactic measure.

Sulfapyridine is not so readily absorbed on oral administration as is sulfanilamide; individuals show rather marked variations in their capacity to absorb the drug. It is best to give it in powder form, suspending the drug in six ounces of water or milk. When there is severe vomiting, the sodium salt of sulfapyridine as prepared by Marshall may be given (3.8 grm. in 5 per cent solution) slowly by the intravenous route in hospitals, this dose being repeated after five hours. None of the solution should, however, be permitted to escape into the tissues around the vein or a slough will occur owing to the high alkalinity of the fluid.

In using sulfapyridine one observes the same precautions as in using sulfanilamide. The patient remains in bed and has daily blood examinations to make sure that the hemoglobin and the white cell count do not go too low; the NPN of the blood should also be followed.

A few patients will develop hematuria or an acute nephropathy in the course of sulfapyridine therapy, apparently because of the formation of acetylsulfapyridine calculi in the renal tubules and pelves. To prevent this complication, Long and Bliss suggest the routine administration of sodium bicarbonate when the drug is used in the hope that an alkaline urine may prevent the precipitation of acetylsulfapyridine in the urine. If hematuria should develop, the use of the drug should be discontinued at once. Even before the hematuria develops a rise in the NPN of the blood is a danger signal that should make one stop the administration of sulfapyridine.

In large medical centers, where typing of the pneumonia is easily done, sulfapyridine treatment should be supplemented by specific serum treatment, since, as Colin M. McLeod has shown, the two are synergistic in experimental infections in mice and combined treatment in man may therefore be found to be more efficacious than either sulfapyridine or serum alone. In such centers the pneumococcus should be typed immediately

and a blood for culture should be withdrawn before beginning the treatment with sulfapyradine. If pneumococcus meningitis or peritonitis is suspected, it is also desirable to secure material for culture before the treatment is instituted. A complete blood examination including determination of the NPN content and an examination of the urine before giving the chemical will permit of daily comparisons during its administration.

STAPHYLOCOCCAL INFECTIONS

It was hoped that in the treatment of staphycoccal infections sulfanilamide might act as well as it does in streptococcal infections, but these hopes met with disappointment. But when sulfapyridine became available, it was soon found that staphylococcal infections respond to it favorably in many cases. In furunculosis, carbuncles, staphylococcus septicaemia, acute osteomyelitis and other staphylococcal infections, a trial of sulfapyridine therapy should be made promptly, the drug being used in the same way as in the treatment of pneumococcus infections. In the treatment of staphylococcal sepsis, sulfapyridine is more effective than any other chemotherapeutic agent thus far tried.

CYSTITIS AND PYELITIS DUE TO INFECTION WITH B. COLI AND OTHER BACTERIA

Infection of the bladder and of the pelvis of the kidney will usually disappear quickly under treatment by sulfanilamide. The fluid intake should be limited to about 1500 cc. daily and 20 grains of sulfanilamide given four times daily for several days; daily cultures of the urine are made as a control. When the urinary infection is due to enterococci, it will not be cured by sulfanilamide, but may respond to mandelic acid therapy.

Patients who do not tolerate sulfanilimade well can sometimes take neoprontosil (E. W. Cook).

GAS GANGRENE

This disease, due to infection with the *Bacillus aerogenes capsulatus* of Welch, should be treated with sulfanilamide since cures have been thus effected in a number of cases (Bohlman, 1937; Kennedy, 1938); Bliss and Long strongly recommend the prompt use of prophylactic doses of sulfanilamide in all patients who have had crushing injuries to prevent the development of gas bacillus infections. For the average adult 15 grains by mouth are given every four hours throughout the day and night for preventive purposes, 60 grains of sodium bicarbonate being given daily along with it. In the treatment of war injuries, the use of sulfanilamide would probably do much to prevent complicating infections.

CONCLUSION

I have said enough, I think, to illustrate the really remarkable results that can now be obtained by means of the newer chemotherapeutic methods. Unfortunately we still have to deal with many forms of infectious disease for which as yet we have no satisfactory method of treatment. The group of diseases due to filtrable viruses still remains to be conquered. Attempts have been made to treat virus diseases (choriomeningitis, rabbit myxoma, rabbit fibroma, influenza, poliomyelitis and encephalitis) with sulfanilamide, prontosil, and sodium-sulfanilil-sulfanilate but thus far the results have not been at all encouraging (cf. McKinley, Meck and Acree, 1939). How wonderful it would be if we could discover "magic bullets" that could be shot into the body and would cure influenza, acute anterior poliomyelitis, and the several forms of acute encephalitis and encephalomyelitis. Let us hope that organic chemists, pharmacologists and investigating clinicians may before long provide us with such remedies.

The Diagnosis and Treatment of Acute Intestinal Obstruction*

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The medical profession is progressively more alert in suspecting and diagnosing acute abdominal disease. Nevertheless, the high mortality accompanying intestinal obstruction has improved very little in the last several years. In spite of advancement in diagnostic methods, surgical management, and increased understanding of altered biochemical reactions, these surgical tragedies continue. Early recognition of acute intestinal obstruction is usually not difficult, if and when its possible existence is anticipated and is given diagnostic consideration. The duration of any abdominal disease with cer-

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tain reservations furnishes the first clue to the mortality, thus indecision and delay in recognition are fundamental reasons for the persistent high mortality in acute ileus. Recognized early and judiciously treated, simple acute intestinal obstruction should carry a low mortality. Procrastination and indecision until the clinical picture is complete and the accompanying mortality climbs to 60 and 70 per cent. The outcome of each case is therefore largely in the hands of the first doctor who sees the patient. He may do most to avert disaster and it is his better understanding of the problem which will definitely reduce the present unwarranted mortality in acute intestinal obstruction.

To comprehend and be able to cope with this problem, we must consider the causes of intestinal obstruction, the effects or results of that obstruction, prophylactic measures worth considering and the treatment indicated. Acute ileus is first divided into two types, mechanical and paralytic. Under mechanical we have simple intestinal obstruction and strangulated obstruction, which is mechanical obstruction in which there is interference with the blood supply. Paralytic obstruction, on the other hand, has no mechanical hindrance to the bowel content flow, but on account of interference with the nerve supply there is inhibition to intestinal movement. The more common causes of acute ileus are adhesions, hernia, malignancy, peritonitis, intussusception, Meckel's diverticulum, volvulus, diverticulitis, congenital occlusion, spinal cord injuries, intra and extraperitoneal hemorrhage, pancreatitis, and pneumonia. Differential diagnosis between the two types may be difficult. Recognition of the types is urgent however, for while the mechanical types of ileus may demand prompt surgery, paralytic ileus is usually treated conservatively. Frequently paralytic or adynamic ileus coexists with mechanical obstruction which further confuses the problem, and adds to the gravity of the situation.

Occlusion of the intestinal tract at any point from the stomach to the anus results in intestinal obstruction. The effects of that obstruction are dependent upon the type of obstruction, the location of that obstruction, whether or not strangulation exists, and lastly the duration of the obstruction. In early simple intestinal obstruction, progressive thinning of the intestinal wall is the first pathological change, resulting from the increasing distention of the obstructed bowel segment. The bowel wall glistens and within there is increased secretion and decreased absorption, which added to the content of air, 70 per cent of which is swallowed, promotes and adds to the picture of obstruction. Unless this obstruction is relieved the peritoneal surface of the intestine becomes dull and granular. The venous blood is dammed back by pressure strangulation and the bowel color gradually changes from pink to purple, then black and finally to gray. The increased secretion has by this time accumulated a large amount of fluid in the intestinal lumen and the content is dark, malodorous and blood-tinged. The bowel wall becomes more permeable and passage of bacteria and toxic products through the sodden gut into the peritoneal cavity takes place. General peritoneal involvement ensues and takes precedence over the potential absence of the bowel lumen. Compression and twisting of nerve fibres in the mesentery at this time may result in intense shock remembering that the peritoneum is probably the most sensitive of all serous membranes. Necrosis of the intestinal wall develops and severe toxemia becomes obvious.

Formerly death was thought to be due to the toxic factor. Recently more thought has been given to the loss of essential fluids, food, and electrolytes, by vomiting, interference with absorption because of distention, and other effects on the bowel wall and its blood supply which might favor abnormal absorption. From the cardiac end of the stomach to the anus there are but two physiological closures, the pyloric spincter and the ileocecal valve. Each functions independently and differs from the other in behaviour. The pylorus relaxes and allows back flow into the stomach on the least provocation, whereas the ileocecal valve gives way to emptying of the ileum into the caecum, it acts like a check valve and does not permit regurgitation from the colon and caecum into the small bowel. The foregoing physiological entity results in prompt, frequent, quantitative, vomiting in high intestinal obstruction and frequently no vomiting in obstruction of the colon, on account of the impassable ileo-cecal valve. The higher the obstruction therefore the more serious are the immediate results. In small bowel obstruction the pylorus relaxes and there is abnormal regurgitation of the intestinal contents from the high secretory small bowel into the stomach. The higher the obstruction and the more frequent and obvious is the vomiting. Rapid decrease in chlorides takes place, with dehydration, blood hypochloremia, and alkalosis following in quick succession. The severity of this reaction depends upon the extent and duration of the obstruction and is most severe in those cases where the vomiting is excessive.

The duration and progress of the stasis have much to do with the gravity of each case and interference with absorption because of bowel distention becomes an important factor. If a simple obstruction is not

relieved, the intestine becomes more distended, the length of involved bowel becomes greater and its wall even thinner. Absorption is not only decreased but by reason of the marked intra enteric pressure the blood supply to the gut wall is hindered, petechial hemorrhages begin to appear and a simple obstruction becomes a strangulated obstruction. There is loss of blood into the segment, blood stream absorption of toxic products, impairment of vitality of the gut, and peritonitis is existent.

The signs and symptoms are again dependent upon the type, location and duration of the obstruction. The symptoms are those of a continuous process which is rapid, destructive and merciless. When the continuity of the intestinal tract is interfered with the first symptom is pain, intermittent and colicky. The patient often speaks of it as gas pain. These pains, which rapidly become more intense, are characteristic. They are intermittent and cramping, first mild and becoming more frequent and more intense. They are waxing and waning, have a long crescendo, a brief top, and a gradual drop with recession. Borborygmus heard at the acme of this intermittent pain is denotative of obstructive colic, dynamic in type. The patient is wide awake, alert and apprehensive but the pulse rate, temperature and respiration, the blood pressure and blood count, show no deviation from normal. Between pains the abdomen is soft and not tender unless an adhesive band is attached to the parietal peritoneum. Soon nausea and vomiting accompany the intermittent pains as relaxation of the pylorus permits emptying of the small bowel back into the stomach. Early simple obstruction gives no local signs and few symptoms. Pain, nausea and vomiting, with abdominal distention usually are the only ones necessary. Obstipation is a valuable symptom and enema information is not always reliable.

The only types of obstruction in which there is no vomiting but great distention is obstruction of the colon. Here distention may go on to extreme, with visible peristalsis and perforation before vomiting becomes a complaint.

When obstructive symtoms appear the first twenty-four or forty-eight hours following surgery, paralytic ileus is the usual cause. Here the pain is continuous, dull, and boreing, instead of recurrent colicky in type. The patient does not appear as ill, distention is rapid, progressive, and soon associated with nausea and vomiting. On auscultation the silent abdomen is pathognomonic, the only sound heard being the mechanical tinkle present just before silence is complete.

Not recognized early while only simple mechanical obstruction exists the succeeding signs and symptoms are based on the pathological changes described. The loss of fluids by vomiting results in dehydration, rising temperature, leucocytosis, blood concentration and loss of electrolytes. The loss of fluid from the tissues into the obstructed bowel segment is followed by weeping of this obstructed gut into the peritoneal cavity. The peritoneum being the most sensitive of all serous membranes general abdominal pain, tenderness and shock now become apparent.

Unless there is prompt relief this mechanical obstructive process now decreases the vitality of the gut, which is the chief lethal factor in simple obstruction. The blood supply to the segment is strangulated and the pain becomes more severe, generalized, and continuous. Tenderness is pronounced, gangrene begins, and with gangrene borborygmus ceases and peritonitis takes precedence over obstruction. Visible peristalsis so frequently spoken of, still is not observed unless the patient is a child or the adult has a very thin abdominal wall. These last signs and symptoms are not the signs of intestinal obstruction to be sought but the manifest stigmata of impending dissolution.

The urgency of keeping intestinal obstruction in mind can hardly be exaggerated, for by so doing prompt diagnosis is made and adequate treatment instituted. The presence of abdominal pain, obstipation and nausea should arouse one's suspicions. When seen in infants intussusception is the most common cause. Seen early the bloody mucous stools and a palpable mass in an otherwise soft, non-tender abdomen clarify the diagnosis. Rotation anomalies and mesenteric fixation make their appearance in older children. At this age Meckel's diverticulum is a frequent cause. Blood in the stools and a history simulating peptic ulcer will help substantiate the diagnosis. In young adults we suspect hernia and post-operative adhesions, less frequently tuberculor peritonitis and benign tumors. Malignancies occur more often during middle age and volvulus and foreign bodies are added to the possibilities. In later life malignancies, impactions and vascular occlusions become more common causes of obstruction.

No morphine should be given which only masks the picture, and the temptation to order a barium meal should be avoided. Too frequently barium given as a diagnostic aid completes an incomplete obstruction, adding insult to injury.

Is the obstruction dynamic or paralytic? Differentiation is mandatory as the treatment in one may be contraindicated in the other. In adynamic ileus there are no recurrent colicky pains, but the pain is contin-

uous, dull, and boreing. Distention is usual and vomiting may be almost continuous as a result of the relaxed pyloric sphincter. There may even be reverse peristalsis. A silent abdomen stands out as differentiating adynamic from mechanical ileus. Paralytic ileus coexisting with mechanical obstruction may be confusing.

Accurate localization of the obstructing factor is of diagnostic and therapeutic value. Is the obstruction in the small bowel or large? Is the obstruction of the high secretory gut or of the low absorptive area? Is it complete or incomplete?

The stomach tube will eliminate the pylorus. Enemata, though successful, are not always helpful unless incomplete obstruction is relieved by the expulsion of flatus and feces, and the symptoms subside. After enemata, rectal examination and proctoscopic investigation will rule out the rectum and sigmoid. All hernia sites should be examined, not overlooking Richter's hernia and remembering that obturator hernias do occur. The ileum is the most common site of involvement and therefore the lower right quadrant should be looked upon as a location of adhesions and obstruction probabilities.

Probably the greatest single help is the x-ray. A scout film taken with the patient supine will indicate the grade as well as the location of the obstruction, and the characteristic herringbone pattern will substantiate the diagnosis. When there is no distention, the presence of gas in the small bowel, which is not normal, will be helpful, while distention of the left half of the colon turns one's attention to the sigmoid and eliminates the small bowel. The patient's condition permitting, roentgenograms in the vertical and lateral positions may show fluid levels of diagnostic value.

Early post-operative ileus may be due to fibrinous exudate. Finally, differential diagnosis is not completed unless the possibilities of lead colic, syphilitic crisis and herpes zoster have been considered. Reflex distention, associated with renal colic and central nervous system lesions, are likewise eliminated before one is sure of the diagnosis.

Treatment cannot be discussed without mentioning prophylaxis. The degree of ileus which develops post-operatively is generally speaking proportional to the exposure, the trauma, and manipulation, during the operation. Gentleness in handling tissues, meticulous haemostasis and exact technique will go far to prevent ileus. There should of course be no pre-operative catharsis.

Treatment of early acute mechanical obstruction should be eradication of the obstructing mechanism and decompression of the distended bowel. The wisdom of immediate operation in early mechanical obstruction is still not a settled question. The aphorism, "the longer a patient with intestinal obstruction lives before operation, the sooner he dies after it," is no longer well grounded. However, when acute mechanical obstruction is recognized early, immediate surgical intervention is the one means of reducing the present mortality of 40 to 60 per cent. Having removed the obstructor, decompression of the distended bowel through the Wangensteen suction duodenal tube is the most valuable addition to the treatment. Intravenous saline solutions with glucose added should be given, which overcomes dehydration and the loss of electrolytes. The glucose should be buffered by insulin as glucose not buffered by insulin inhibits peristalsis.

Blood transfusions, both before and after surgery, are of course superior to other intravenous therapy. Heat applied to the abdomen through a lighted cradle or diathermy adds comfort and promotes subsidence of the distention. Morphine, which we now know is an intestinal stimulant, should be given in adequate amount. The wisdom of using pitressin, prostigmin, choline, and similar drugs is questionable and is an individual problem.

Strangulated intestinal obstruction must be operated without delay. The procedure is hazardous and the outcome questionable, and all resources of surgical care and skill are required. Replacement of lost fluids, insurance of an empty stomach, maintenance of the blood pressure and the minimal exposure of the viscera are all essential to success.

Early paralytic ileus is indication for treatment by the Wangensteen trans-nasal duodenal tube which quickens the decompression of the distended bowel and makes certain an empty stomach. Morphine in sufficient amount, intravenous saline solution, and the application of heat will result in recovery in most instances. Generally speaking, the less surgery done the better the results are likely to be. However, an occasional enterostomy is necessary, in which case the Witzel technique is the procedure of choice.

When mechanical obstruction is not recognized until there is damage to the bowel wall it should be treated conservatively. Surgery is injudicious and decompression wise. The Wangensteen suction tube may result in decompression, while again enterostomy may become necessary. When enterostomy is done the first loop of bowel delivered is usually made use of, but if possible the enterostomy should be placed just above the obstruction. Generally speaking, the less surgery done the better the prognosis. Resections and immediate anastamoses are spectacular but carry the highest mortality.

If the obstruction is in the colon or sigmoid, caecostomy is frequently preferable. It permits decompression of the distended colon independent of the ileo-caecal valve and allows the large bowel to return to normal before further operative procedures are carried out. Single stage resections are still done but less frequently. Decompression, permitting subsidence of the inflammatory reaction and thorough cleansing by irrigation prepares the patient for further surgery and reduces the mortality. As John Deaver said, "It is better to perform two operations and look forward to a living patient than one operation and a dead patient."

The gravity of acute intestinal obstruction is appreciated when one investigates the incidence and mortality. Hours of delay in obtaining medical attention and diagnostic deliberation are potent factors in the mortality. Early surgical intervention which removes the obstructing factor and decompression of the distended bowel are the essentials in treating mechanical ileus. The surgical treatment of paralytic ileus is debatable. The Wangensteen trans-nasal suction apparatus is probably the greatest single advance in therapy in recent years. The Witzel type of enterostomy is the most conservative type and the method of choice in most instances. The use of drugs, other than morphine, have not proven entirely satisfactory, though miraculous results have been reported. Prompt attention, early accurate diagnosis and judicious treatment of the individual as well as the obstruction are followed by the best results.

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Technique of Refraction*

H. F. VANDEVER, M.D.

ENID, OKLA.

In the presentation of this subject, I have tried to avoid the orthodox instruction as can be obtained from any text book and confine my remarks to points that I think have been of greater help to me and produced better satisfied patients.

Since the greater part of the revenue, accruing to the E. E. N. & T. man, is derived from the fitting of glasses, it is surprising to note that the technique of refraction so seldom receives any attention. One would think after looking over the program offered by our sections in the various societies that this subject was either so trivial as to de-

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mand no consideration or so thoroughly understood and so completely developed as to leave nothing whatever to be added. So far as I know I have nothing new to offer. I have chosen this subject for discussion with one purpose in mind; namely, that it may provoke some debate on methods of technique whereby each of us may learn some few points that will enable us to furnish a better service to our patients with a consequent greater satisfaction for ourselves.

To my mind, completely performed refraction cannot be done in five or ten minutes. The man who boasts of being able to complete a refraction in ten minutes is just about forty minutes better than I am. The fitting of glasses as carried out in my office is divided into the following steps:

First. History of the complaint that has brought the patient to the office.

Second. The objective examination of the eyelids and eyeball with palpation of the eyeball.

Third. Recording of the vision before anything is done.

Fourth. Retinoscopg with recording of the results.

Fifth. Cycloplegic in most all patients who have not lost their accommodation with the retest after fifty minutes has elapsed.

Sixth. Allowances made for age, vocation and myopes.

Seventh. Frame fitting and measurements.

Eighth. Lenses, bifocals, kind, size, shape, colored or not.

Ninth. Fundus examination.

We shall now discuss in brief detail some of the points we deem pertinent to enable us to properly evaluate and supply the correct refraction.

First. In taking the history of a patient relative to his eye complaints, I want to know: When do your eyes trouble you? To this, he will answer that he gets up with a headache in the morning—or he always has headaches after an hour's ride in a car—or attendance at a movie always results in a headache—or that his headache begins at 9 or 10 o'clock, as soon as he is up awhile. The interpretation of the above answers are that the headache that he awakens with is not from the eyes while the others are. My next question is: In what way do your eyes bother you? To this he replies that he has blurriness on reading, headache, redness and gets sleepy. Which to me points definitely to an error in refraction, as the most logical cause of the symptoms, and most likely to be astigmatic or hyperoptic, though in a few cases a myope will be found to have annoying eye symptoms.

Second. In making the objective examination of the eyes, the lids and globe should never be overlooked. Palpation will reveal the necessity or not of using the tonometer. Granules of the lids, obliteration of lid structure, concretion in the tubular glands, blepharitis and pterygia and any gross pathology of iris or cornea can be quickly eliminated or discovered. We must in every case know the presence or absence of the aforenamed to enable us to properly proceed to an intelligent refraction and further treatment.

Third. The vision should always be taken and recorded before examination for refraction or any medication is done. The amount of vision usually proves a more or less helpful guide in the refraction and always forestalls the cycloplegic from being responsible for a blind eye the patient may have been ignorant of possessing.

Fourth. This step is retinoscopy in every case. (I use a Copeland Streak) I have been using one for the past three years and am more enthusiastic as to its value both as to its accuracy and time-saving advantage, than any thing I have in the office. In my hands it is absolutely accurate and scientific. In the higher refraction errors, one spots them immediately and can proceed with confidence that he is right. Astigmatism is readily recognized, its axis positively and quickly recognized and the strength of the cylinder easily measured. If you have tried this instrument and don't like it, go to it and at it again, and reserve your judgment until you have used it six months on every refraction and then if you don't like it, throw it away, for there is something the matter with the instrument. Not any of us mastered the trial case in six months, so why should we expect to become proficient with a brand new instrument in a week.

The result of the retinoscopy is recorded and as stated above in nearly every case under 40 a cycloplegic is used. After accommodation is allayed the retinoscopy is repeated, recorded and the trial case is called upon to confirm the results.

This is the usual finding at the trial case. Either a quarter sphere is added or subtracted from the retinoscopy finding to improve acuity with the cylinder being absolutely right. I am very reluctant to make any changes in the cylindrical finding of the retinoscope. I always fit the full amount of cylindrical error found.

My experience has been that old people and some not so old are so anxious that in the cases of lessened acuity they are undecided many times to one-half or three-quarters of a dioptre of what they need. It's nice to tell 'em. In children of pre-school age and even up to the third and fourth grades, one must be very cautious in accepting their judgment at the trial case.

Fifth. As a cycloplegic, I have used Homatroin powder, (100 per cent) for years. I put it in the eye with a small spatula. Lifting the upper lid away from the eye and instructing the patient to look downward, I deposit a wee bit on the under outer portion of the lid. This is repeated in five minutes, then in five more minutes installation of one drop of paredrine hydrobromide is made into each eye and when accommodation is allayed (about 50 minutes) the refraction is completed.

Sixth. After positive measurement of the amount of refraction has been determined, it is now a matter of judgment just how nearly complete the prescription should satisfy the findings. This is dependent upon the age of the patient, the difference in the pre- and post-refractive findings (from installation of cycloplegic) the eye-symptoms that caused the patient to seek relief, the temperament, vocation and the use to which glasses will be subjected.

Much detail could be given the preceding paragraph. I will briefly call attention to the age; most young patients will wear glasses, if not over corrected with no complaint and complete comfort and relief. I inform, when I am through with the examination, to the beginning presbyopes that they are buying themselves a great big bundle of troubles. Then explain to them the way to use the glasses to help them accustom themselves to the blurriness they will see when looking through the segs etc. I have very little trouble except with a small number, who return complaining that upon reading they get sleepy and their eyes tire and they have to stop reading. They are resold and a pair of treatment glasses or base or prisms are given to use daily for a few days and everything is all right. At least for a while.

The "Temperment" all of us either enjoy trying to "out Tact" or become disgusted. The latter attitude does not solve the situation.

Vocation and use should receive very particular consideration, for upon the true evaluation of the necessities in each particular case, depend the position, and size of bifocals and to a large extent the kind and style of frame.

Seventh. Frame fitting and measurement is a very important part in delivering a comfortable feeling and looking pair of glasses. One should have some definite ideas of where the top of the lenses should be, its relative position and shape in reference to the eyebrow, its distance from the side of the nose, the distance from the eyeball, length of nose, shape of face and most important of all the pupillary distance and see that bifocals are placed as should be to comply with it. All these facts should be taken into consideration together with the proper pad and temple adjustment to produce the results to satisfy all. I never leave this to the optical house. It's okay if you want to risk it, but they don't get the job done in many cases.

Eighth. I universally use clear lenses except when there is a definite indication either in the vocation or history that causes me to modify such a choice. No optical salesman has yet appeared that has demonstrated to my satisfaction the scientific, visual wearing merits of colored lenses. That Ray-Ban and Calabar, in the darker shades, as an extra pair of glasses or snap-on front are both comfortable and sensible as well as necessary to many wearers I am thoroughly convinced. Proof that they afford comfort to many eyes is undeniable. That there is any place for the light shades in colored glasses save to satisfy some folk's peculiar appreciation for the beautiful, and secondly to permit the optical houses to exploit our patients. I am positively convinced.

Bifocals to give the greatest reading and wearing comfort for the ordinary person should be made small and placed high. Never under any circumstances change the height of a bifocal seg unless the wearer is dissatisfied with its present position.

In fitting bifocals where the cylinder is oblique or horizontal, combined with an unequal amount of strength in the two eyes, consideration of this point must never be overlooked, for compensation for this difference in the addition of the necessary prism to the seg is the difference between comfortable and uncomfortable glasses. Don't get over-enthusiastic along this line. The needs for such corrections are few.

Ninth. The fundus examinations is done at this time because in every case where a cycloplegic is used the patient has a wide open pupil. If the opthalmoscope is used before the refraction is made many patients complain that the spot that is before their eyes interferes with seeing.

Van Meter Prize Again Offered

The American Association for the Study of Goiter again offers the Van Meter Prize Award of three hundred dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the Association which will be held at Rochester, Minn., on April 15, 16 and 17, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed three thousand words in length; must be presented in English; and a typewritten double spaced copy sent to the Corresponding Secretary, Dr. W. Blair Mosser, 133 Biddle Street, Kane, Pennsylvania, not later than March 15.

A place will be reserved on the program of the annual meeting for presentation of the prize award essay by the author if it is possible for him to attend.

EDITORIALS

MEDICINE AND DEMOCRACY

Hippocrates, the father of medicine in the 5th century B. C., gave us the first declaration of independence. Under the stimulus of Socrates' straight thinking and analytical methods applied to the individual problems of his contemporaries, Hippocrates broke away from the restrictive domination of the Church, the folly of magic and the false premises of philosophy, and in a thoroughly democratic spirit he embarked upon the relentless pursuit of truth.

For the purpose of recording, safeguarding and perpetuating these democratic principles in medicine, the Hippocratic Oath was evolved. It embodied a passion for personal freedom, a plea for justice, a devotion to truth and a spirit of brotherhood which marked a high point in the history of civilization.

True democracy strives to preserve the individual dignity of man and to create an environment which provides equality of privilege, independence of thought, the power of initiative, freedom of action and facilities for sound education, all of which are attributes of true security. True democracy represents a quest for the enduring satisfactions of life. In the last analysis, it is a sustained search for truth. Obviously truth comes only through freedom of thought and action.

American democracy represents an escape from our slavery to Europe. The freedom we gained was, in principle, much like that achieved for medicine when Hippocrates broke with magic, philosophy and the Church.

If the inviolable principle of democracy, which is the dignity of man, is to endure, the freedom of medicine must be preserved. Our forefathers fought for the freedom of democracy. Too long we have rested in their glory and enjoyed the fruits of their heroic efforts with little thought of the future. Though the spirit of eternal youth and vigor is inherent in democracy, it may become pallid and powerless through indifference and neglect.

Democracy is safeguarded through sound education. In this day of paternalism and socialistic trends in government, we should make use of every opportunity to disseminate knowledge which may help preserve individual freedom. If all the people knew the truth about medicine and democracy, there would be little danger of socialized medicine in any form. If only the members of the legislative and administrative branches of our government knew more about medicine, they might be hounding the medical profession about the sins of commission rather than omission. Instead, they face the embarrassment of a strange paradox. Through the stimulus of defective surveys and lay enthusiasts, with more zeal than knowledge, they allege that a large percentage of our people are suffering for want of adequate medical care and that a correction of this deficiency would solve many social, economic and physical ills. If this were true, the paradox would still stare us in the face. We would continue to have two problem age groups which are largely the result of good medical care.

In truth, the people of the United States now have the most efficient, comprehensive medical service in the history of the world. In the past quarter of a century, the average expectancy of life has moved up from 48 to 61 years. This increase has been accomplished through medicine and surgery and the medical control of environment, including sanitary engineering. For the benefit of those who doubt, we have only to mention the control of tuberculosis, typhoid fever, diphtheria, infant diorrhea, scarlet fever, diabetes, etc. Surgery also has effected a great reduction in mortality. Under modern living conditions, large cities could not exist without preventive medicine and sanitary engineering. Certainly medicine under bureaucratic control, with double the cost, could do no better.

It behooves the citizens of this democracy, and particularly our legislative and administrative bodies, to look far below the crust of the critical present; to take stock of the past and to carefully consider the future. We must not insult the dignity of man by sacrificing any part of our cherished democracy.

Again referring to the paradox, it may be said that prominent among the inherent dangers of democracy are the problems of two age groups. First, there is always the hazard of an impulsive, improperly educated, antagonistic youth group; and, second, there is the growing burden of an old age group. Daily it becomes more obvious that these groups are among the serious problems of our own country.

The medical service now available is largely responsible for the present magnitude of these two problems. The saving of life in infancy and the fostering of health in childhood and adolescence have produced a vigorous youth. The continued protection of good medical care has increased the span of life to the point of pyramiding, what promises to be, an unhappy old age.

In the light of available knowledge, it would be well if politicians devoted their energies toward the solution of these rather serious problems which good medical care has helped to create, rather than apply undemocratic regimentation to members of the medical profession and millions of citizens who would suffer a corresponding limitation of personal freedom. If the plans of the politicians worked, they would further cripple democracy by piling up trouble in these two groups. Constructive gainful employment with remuneration which could be received with dignity, is what both age groups are in need of, and, most of all, this is what our democracy requires. Our people are clamoring for honorable bread and butter, and not for better medical care. There is no point in a blanket rule of retirement from manual labor or intellectual pursuits at 60 or 65 years of age. The youth problem is now being aggravated by the anticipation of taxes for the maintenance of the aged.

There is great danger of mistaking the burdens of social, economic, industrial and mechanistic development for the burdens of disease. The latter have been largely lifted from the shoulders of society, while with shifting emphasis upon the manner of living, with increasing aloofness from the soil, and the dominant note of mechanistic science, the evils of our progress keep pace with, and adversely influence, the benefits.

Government medicine under bureaucratic control would not improve the general tone of medical care, but it would be a serious blow to democracy, and it would waste large sums of money which might be employed toward the solution of the age group problems.

If the government desires to alleviate suffering and save life, it might undertake the control of some of the physical forces which exercise their anulling and killing power through the science which speeds up our mechanistic progress. For example, a great reduction in morbidity and mortality could be achieved through the improvement and widening of highways, the employment of safety devices and the careful determination of mental and physical fitness of drivers. In the broad field of industry there are many similar opportunities which do not fall in the domain of medicine.

But it must not be forgotten that medicine has bravely met the challenge of this high-geared mechanistic progress. The development in orthopedic and brain surgery has been phenomenal. This again reveals medicine's alert response to new demands with surprising ingenuity and adaptability.

The few facts presented above are sufficient to indicate that medicine is keeping abreast with other lines of social endeavor. If our democracy really wants good medical care, would it not be wise to let the medical profession carry on as it has in the past?

Referring directly to the alleged need, it may be said that the members of the medical profession have served the poor for a period of 2500 years. They are willing to continue this contribution to society. This is made manifest by the numerous voluntary organizations recently developed within the medical profession for the purpose of giving medical service in an organized way and in keeping with present trends. Let local needs be determined by local agencies and met by the members of the local medical profession. If Federal aid is necessary, let it be allocated according to the estimated need and locally administered. Medicine adheres to the democratic belief that charity begins at home and should remain at home.

Finally, if legislators and government administrators were required to spend six to eight years in a school for the study of democratic government, and if they looked upon the constitution of the United States and the Bill of Rights as medicine looks upon the Oath of Hippocrates, they would know that any radical change in the present type of medical service would be undemocratic and would threaten the very foundation of our traditional freedom.

But we should not expect perfection, we are "born to trouble," and must learn to take it. Keats once said: "A man should have the fine point of his soul taken off, to be fit for this world." Since we must share the faults of our day, we should strive to live in harmony with each other and to make the world as guiltless as possible. With this in view, medicine is seeking a more enlightened judgment as to what constitutes adequate medical service and how it may be extended without seriously disturbing the dignity of mankind.—L. J. Moorman.

MEMBERSHIP

In Oklahoma there are five hundred physicians who are not members of the State Association but should join.

The dues have been reduced by the House of Delegates to $10.00 and for this investment each member receives very valuable returns.

First: With State Membership goes membership in the American Medical Association, although the A. M. A. receives no part of the dues. If fellowship in the A. M. A. is desired, the physician must subscribe for the Journal of the A. M. A. and with this subscription goes all the privileges of the Association—and without doubt the A. M. A. is entitled to this support by every practicing physician.

Second: Unless membership in the State Association is secured by an individual physician he is not carrying his share of the load. He is obtaining the benefits of the work done by the organization with no effort on his part, not even any degree of cooperation.

Third: He is missing, if not a member, one of the real joys of his profession. Fellowship—The mutual interests of physicians makes this fellowship a factor in the solution of our daily problems, and these problems grow more complex during the changing times. How can a physician live without it?

Fourth: The science of medicine is constantly and rapidly progressing and in the County and State Society meetings discussion of timely subjects is encouraged, helping in a very definite way to keep the physician abreast of the times.

Fifth: Membership adds dignity to the standing of a physician. We know that prestige is gained as is indicated by the fact that it is usually a part of the qualification of the expert witness in Court and is usually required of physicians doing work for Insurance Companies, either in the treatment of insurance covered cases or in the making of life insurance examinations.

Sixth: There are grave economic problems to be solved and the profession as well as the laity are entitled to the counsel of each physician in this solution.

Seventh: Join your County Society so that we may present a united front as we go before our people with our views relative to the solution of the problems now presenting. Much more good can be accomplished when we have the 2,000 members which we should have during this year.

If our membership reaches 1,551 by April first, we will have three delegates to the A. M. A. Everybody please make an honest effort to reach this goal—County Secretaries take notice.

Venereal Disease Control Standards

Standards with which states using federal funds for venereal disease control have been asked to comply beginning January 1 were recently announced by the U. S. Public Health Service.

Seven general provisions were listed as follows:

1. State and local laboratories receiving funds shall demonstrate that serologic tests for syphilis performed by them have a satisfactory sensitivity and specificity rating.

2. Laboratories receiving federal money shall provide services for venereal diseases on the same basis as for other communicable diseases.

3. Health departments and clinics receiving funds shall provide free diagnostic and treatment facilities for (a) the diagnosis and emergency treatment of all patients who apply; (b) all patients referred to a private physician either for continued treatment or for consultative advice and opinion; (c) all patients unable to afford private medical care.

4. All antisyphilitic drugs shall be distributed free on request to all licensed physicians.

5. Diagnostic and treatment facilities shall be available to all persons whether from the particular state or some other location.

6. Properly qualified full time venereal disease control officers shall be employed by the state department of health and all municipalities receiving funds.

7. State health officers shall give due consideration to the relatively higher prevalence of syphilis in urban areas.

These standards constitute the framework around which it is hoped that the complete program will be developed, according to a statement from the surgeon general. He pointed out, however, that the money appropriated by the federal, state and local governments plus the funds made available by various philanthropic and other agencies does not yet approximate the estimates considered necessary for an effective campaign against the venereal diseases.

Report Cobra Venom For Arthritis Relief

Cobra venom offers possibilities of proving of value for the relief of pain from neuralgia, arthritis and related disorders, Otto Steinbrocker, M.D., George C. McEachern, M.D., Emanuel P. LaMotta, M.D., and Freeman Brooks, M.D., New York, reveal in The Journal of the American Medical Association for January 27 in a report that 59.01 per cent of sixty-one patients in whom they injected venom were slightly or moderately benefitted.

The results from injections of cobra venom are compared by the investigators with those obtained from injections of saline salty solution in thirty-six patients also suffering from arthritic disorders, only seven of whom experienced any benefit.

"Accurate determination of such treatment value requires further controlled investigation in a large series of the various rheumatic conditions," the authors caution.

Further discussing the results, they say: "The good effects of the snake extract were in no instance apparent before at least five injections (given from two to five a week) had been administered, and usually from eight to ten treatments were required before any benefit was admitted or noticed. The venom cannot be substituted for the predictable, rapid pain-relieving effect of a narcotic, nor does it seem to act uniformly as to degree and time in approximately similar involvement."

Hemorrhage Control Vitamin Reported

The control of hemorrhage in ten patients suffering from a deficiency of prothrombin, the blood clotting factor, by administration of a synthetic vitamin K is reported by Jonathan E. Rhoads, M.D., and Maurice T. Fliegelman, M.D., Philadelphia, in a recent issue of the Journal of the American Medical Association.

The vitamin K substitute used is known at present only by its chemical name of 2-methyl-1. 4-naphthoquinone. The results obtained by the Philadelphia men, they say, seem to confirm the high potency demonstrated for this compound in investigations on chicks.

Three of the patients in whom a satisfactory response was obtained had failed to respond satisfactorily to various forms of vitamin K. In six cases the clotting time returned to normal within twenty-four hours or less after the initial dose of the substitute.

• THE PRESIDENT'S PAGE •

On January 31, 431 of last year's members of the Oklahoma State Medical Association had renewed their membership for 1940, and had thus reaffirmed their faith in the principles and ideals of not only their state medical Association, but in the principles and ideals of American Medicine.

This is indeed a fitting tribute to the past officers of the Association who have since statehood maintained through their leadership an Association that has merited and received the support of the progressive doctors of Oklahoma.

Membership alone is not enough, but more especially in these times of changing economic and scientific conditions it should be the self-assumed duty of every doctor of Oklahoma to place his shoulder to the wheel of progress and give to his community the benefits of organized medicine.

Nineteen hundred and forty finds your Association sponsoring two Post-Graduate courses, the ultimate value of which cannot at this time be estimated. The Post-Graduate Course in Cancer is well under way, and the Post-Graduate Course in Pediatrics began the 19th of this month. This is progressive medicine; subscribe to it, encourage it, and above all, use it.

W. T. Howard

President.

COUNTY SOCIETIES . . . NEWS NOTES

Enthusiastic Response Marks Progress of Cancer Program

Drawing enthusiastic response from the lay public as well as physicians, the statewide Post-Graduate course in Cancer made its debut early this month in northeast Oklahoma, with Dr. J. Samuel Binkley winning acclaim from his audiences with his instructive lectures.

Despite inclement weather that accompanied the opening of the two-month program, satisfactory crowds convened to hear the New York cancer authority discuss the necessity for and the scientific angles of the control of cancer.

Doctor Binkley, beginning his series of lectures in Miami, and proceeding the first week to Vinita, Claremore, Bartlesville and Tulsa, is being accompanied by Mr. E. C. Stoy of the State Health Department, who is operating his movie equipment, slides and other equipment.

Besides the afternoon lay lectures and his talks before the county medical societies in every center, Doctor Binkley has been scheduled in numerous instances for clinics of instructive value to the doctors, and for talks before civic clubs, Chambers of Commerce, schools and other bodies. Because of the interest in the advancement of and research in cancer control, the course is receiving prominent statewide publicity, through newspapers, radio and by word of mouth.

Advance information as to program plans outlined by local county medical societies and the Women's Field Army representatives working with them is desired by the office of the Cancer Committee of the Oklahoma State Medical Association, 210 Plaza Court, Oklahoma City. Cancer Committees of those county medical societies who have not already sent in this information as to the time and hour of the lay and medical meetings in their respective centers are respectfully requested to do so as soon as possible.

Representing the state at the national public health meeting in Atlanta, Georgia, February 13 and 14 were Dr. Grady F. Mathews, Oklahoma State Health Commissioner, Dr. Vance Morgan of Oklahoma City, Dr. E. A. Gillis and Dr. David V. Hudson, Tulsa.

Students in the Perry schools this month are receiving the benefits of a general health clinic conducted by members of the Noble County Medical Association under the sponsorship of the city's Parent-Teacher Association. The clinic affects all school children from the first grade through the high school classes.

Medical Defense Fund Rules

At the recent meeting of the Council of the Oklahoma State Medical Association, it was voted unanimously by the Councilors present to amend Rule 3 of the rules governing the Medical Defense Fund. This rule which read

"A member is not subject to coverage if he carries other liability insurance."

now reads

"All members in good standing of the Oklahoma State Medical Association shall be eligible for participation in the Medical Defense Fund of the Association."

Kay County Group Host to Doctors

Physicians and surgeons of Garfield, Grant, Kay, Noble, Osage and Pawnee County Medical Societies convened in Ponca City January 25 for the quarterly meeting of the Northern Oklahoma County Society. Dr. George Niemann and Dr. R. G. Obermüller of the Kay County group were in charge of arrangements.

Speakers on the afternoon program included Dr. Coyne H. Campbell, Dr. LeRoy D. Loug and Dr. Henry H. Turner of Oklahoma City, Dr. Hays R. Yandell of Ponca City, and Dr. Charles Sherwin of St. Louis University. Dr. Sherwin and Dr. A. S. Risser of Blackwell were speakers at the dinner in the evening.

First Texas Chemical Company Names Officers

At the annual meeting of the stockholders of the First Texas Chemical Manufacturing Company held in their Dallas office January 13, the following stockholders were elected directors for the ensuing year: J. S. Kenne, George Miller, L. N. Hays, B. B. Johnston, and F. O. Burns.

Following the stockholders' meeting, the directors named as officers for this year the following: J. S. Keene, president and general manager; B. B. Johnston, vice-president; V. M. Payne, vice president; F. O. Burns, secretary-treasurer.

The company's sales for 1939 were the largest in its history. The program for the future includes the addition of two stories to the present plant, the expenditure of a $25,000 budget for advertising new products, and extension of trade territory.

Founded 1896 by Dr. Hubert Work



A MODERN, newly constructed sanitarium for the scientific care and treatment of those nervously and mentally ill, the senile and drug addict.

WOODCROFT HOSPITAL

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IMMUNE GLOBULIN (Human)
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CONCERN over the complications of measles may be greatly lessened by the use of Immune Globulin (Human). When the complications of this disease, especially bronchopneumonia, are removed, measles is reduced to the level of a mildly inconvenient episode in the child's life. A single injection of Immune Globulin will generally produce a modified measles which is not apt to be followed by complications. The injection should be given a few days after intimate exposure to the infection.

For a child of two years or less, inject 2 cc.; for older children add 0.25 cc. for each year above the age of two to a maximum of 4 cc.

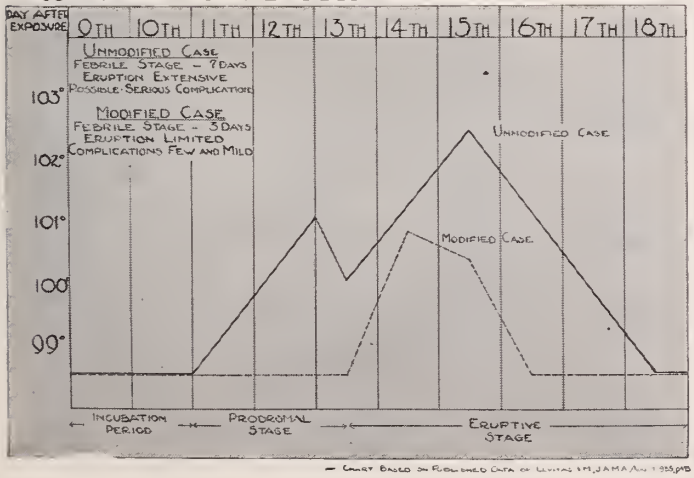
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MODIFICATION OF MEASLES WITH IMMUNE GLOBULIN



— CHART BASED ON REDRAWN DATA OF LEVINE ET AL, JAMA, JAN 7 1933, P 13

At the regular monthly meeting of the Carter County Medical Society January 29 in Ardmore, Dr. G. E. Johnson, Ardmore, discussed "The Chronic Prostate," and Dr. W. D. Blassingame talked on "Diarrhea in Infants." Applications for membership were received from Dr. James Smith and Dr. William A. Loy, both of Ardmore.

Dr. P. B. Rice of Antlers has been appointed a resident physician by the United States Indian Service, the appointment becoming effective on January 1. Service to the Indians will be broadened when a nurse is assigned to his office, a step expected to be made soon.

His activities in civic work were recognized this past month when Dr. Merl Clift, Blackwell physician and surgeon, was elected president of the Blackwell Chamber of Commerce. Dr. Clift is the president of the Kay County Medical Society for 1940.

Dr. Paul Gallaher of Shawnee, accompanied by Mrs. Gallaher, attended the sectional meeting of the American College of Surgeons, January 17 to 19, in New Orleans, La.

Active duty in the navy's new medical aviation corps has been ordered for Dr. R. B. Ford of Tulsa. Doctor Ford will serve one month at Pensacola, Fla., where the navy is training reserve pilots.

Twenty doctors were present at installation services for newly elected officers of the Hughes County Medical Society at the January meeting in Holdenville. Dr. Henry H. Turner and Dr. Onis G. Hazel of Oklahoma City were principal speakers on the program.

A proposed $38,000 bond issue for a county hospital brought to a vote in mid-January, was rejected by Nowata county voters. The proposal lacked five votes of obtaining the necessary 60 per cent of all votes cast.

A luncheon at the Judkin-Forbes hotel in Poteau preceded the January business meeting of the Women's Auxiliary of the LeFlore County Medical Society. The members met as the guests of Mrs. S. D. Bevill. As features of the program, Mrs. W. L. Shippey and Mrs. Earl Woodson read papers from Hygeia magazine.

At a recent meeting of the Bryan County Medical Society, a resolution was passed providing for the society to cooperate with the establishment of a free venereal disease clinic in Bryan County. The clinic is under the auspices of the State Health Department and directed by Dr. W. W. Mead of health unit No. 5, which is now operating in Bryan county schools in prevention and control of communicable diseases.

Honoring Dr. Tom Lowry, newly elected president of the Oklahoma County Medical Society, members entertained with a dinner-dance January 20 at the Oklahoma City Golf and Country Club.

Dr. R. H. Sherrill was elected leading citizen of Broken Bow by a large majority of votes in a contest sponsored in that city by the Boy Scouts.

Dr. D. C. McCalib, physician at Ringling for the past three years, moved in late January to Colbert, where he will continue his practice.

At the January meeting of the Garfield County Medical Society in Enid, two Tulsa physicians appeared as featured speakers on the program. Dr. W. J. Trainor spoke on diagnosis of heart conditions by x-ray, and Dr. Fred E. Woodson presented a paper on "Selection of an Anaesthetic for the Cardiac Patient." Dr. W. P. Neilson, presiding at his first meeting as president, announced his committee appointments.

Dr. William D. Haggard, 67, Nashville, Tenn., past president of the American Medical Association and the American College of Surgeons, died of a heart ailment in Palm Beach, Fla., January 28. The surgeon's fatal illness occurred during his sleep in a hotel.

The Psychological Aspects of Cod Liver Oil Administration

Some authorities recommend that cod liver oil be given in the morning and at bedtime when the stomach is empty, while others prefer to give it after meals in order not to retard gastric secretion. If the mother will place the very young baby on her lap and hold the child's mouth open by gently pressing the cheeks together between her thumb and fingers while she administers the oil, all of it will be taken. The infant soon becomes accustomed to taking the oil without having its mouth held open. It is most important that the mother administer the oil in a matter-of-fact manner, without apology or expression of sympathy.

If given cold, cod liver oil has little taste, for the cold tends to paralyze momentarily the gustatory nerves. As any "taste" is largely a metallic one from the silver or silverplated spoon (particularly if the plating is worn), a glass spoon has an advantage.

On account of its higher potency in Vitamins A and D, Mead's Cod Liver Oil Fortified with Percomorph Liver Oil may be given in one-third the ordinary cod liver oil dosage, and is particularly desirable in cases of fat tolerance.

Oklahoma City Internists Elect Officers

Dr. Arthur W. White was elected chairman of the Oklahoma City Internists' Association at a meeting held January 20. Named to the position of secretary-treasurer was Dr. Elmer Musick.

The Oklahoma City internists are sponsoring the second annual Washington Birthday Medical Clinics February 22 at University Hospital in Oklahoma City.

Obstetrics Examination Date Changed

The general oral and pathological examinations (Part II) of the American Board of Obstetrics and Gynecology for all candidates (Groups A and B) will be conducted by the entire Board at the Atlantic City Hospital, Atlantic City, N. J., from Friday, June 7, through Monday, June 10, 1940, prior to the opening of the annual meeting of the American Medical Association in New York City on Wednesday, June 12, 1940. Candidates are requested to note that the dates of the examinations have been advanced one day from those previously announced.

Application for admission to Group A, Part II, examinations must be on file in the Secretary's Office not later than March 15, 1940. Candidates for re-examination in Part II must make written application to the Secretary's Office before April 15.

Formal notice of the time and place of these examinations will be sent each candidate several weeks in advance of the examination dates.

The annual dinner of the Board will be held in New York City on Wednesday evening, June 12, 1940, at the Hotel McAlpin. For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh, Pennsylvania.

Mr. Vance Womack of Rattan, Oklahoma, has informed the Executive Secretary's office of an opening for a physician in his territory where no doctor or druggist is now located. He asks that any physician interested write or visit him concerning locating there.

Osler Club Visits Geology Museum

The museum of geology and paleontology at the University of Oklahoma proved an interesting point of study for the Osler Medical History Club of Oklahoma City, members of which visited the museum January 11 to study the vertebrae reptilian collection and the paleontology exhibits.

The club visitors were Dr. Bert Keltz, president, and Mrs. Keltz; Dr. L. J. Moorman, Dr. and Mrs. Anson Clark, Dr. and Mrs. Tulles O. Coston, Dr. and Mrs. John Lamb, Dr. and Mrs. Robert I. Trent, Dr. Gerald Rogers, Dr. and Mrs. Wood Shaffer, and Miss Pauline Harrell. Norman guests at the dinner following the museum visit were Dr. J. Willis Stovall, associate professor of paleontology, and Mrs. Stovall; Dr. Clifford Merritt, Dr. Iva Stephen Merritt, and Dr. and Mrs. C. E. Decker.

Receives Bacteriology Award

At the annual meetnig of the Society of American Bacteriologists in New Haven in late December, the Eli Lilly Award of a medal and $1,000 was presented to Dr. John G. Kidd of the Rockefeller Institute for Medical Research, New York. The award is made to a young man or woman under 31 years of age for outstanding contributions to bacteriology or immunology. Dr. Kidd, who has been a research assistant at the institute since 1934, received the honor for original work on animal tumors of virus etiology.

A. M. A. Convention Plans Under Way

"Plans are well under way for one of the greatest annual sessions of the American Medical Association ever held in its history," the Association's Journal for February 3 declares in an editorial. "This session is scheduled to take place in New York City June 10-14 inclusive. The meeting places of the various sections will involve the use of the Waldorf-Astoria, the Commodore, the Roosevelt and the Biltmore hotels; registration of Fellows and all the exhibits will be in the Grand Central Palace. The opening meeting will be held in one of the large assembly halls in the same area."

Principal Cities Report Deaths

The Buerau of the Census reports that 429,419 persons died in eighty-eight major cities in the United States in 1939 as compared with 424,348 in 1938, an increase of one per cent. Infant deaths decreased from 27,159 in 1938 to 25,713 in 1939. These figures were compiled from weekly telegraphic reports received from departments of health in the cities listed.

Because of the impracticability of making accurate estimates of city populations, total death rates were not computed. The weekly death totals reported in 1939 were consistently lower than the average totals for the preceding three years from January to July, but during the rest of the year they were closely similar.

Special Broadcast Set For February 21

A special broadcast on "Pastenr Conquers Rabies" will be presented from 9 to 9:30 p. m. central standard time, February 21, by the American Medical Association and the National Broadcasting Company.

The program, which will be broadcast by seventy stations of the Blue network, will be based on an article, "Watch Your Dog!" appearing simultaneously in Hygeia, The Health Magazine, and on official reports dealing with rabies in the United States. Music from the score which accompanied the motion picture on Lonis Pasteur, made available through the courtesy of Warner Brothers, will be used on the program.



Doctor—here's how wholesome Chewing Gum *helps build good will for you*

Every doctor knows the importance of ending up a consultation in a friendly, cheerful way.

Many doctors know how helpful it is to have on hand a supply of wholesome, delicious Chewing Gum to offer patients when saying "good-bye." This inexpensive enjoyment sends them away with a good taste in their mouths!

Aside from good-will value, as you know, chewing exercises the teeth, helps cleanse and brighten them and is a refreshing pleasure. Try it, doctor.

The National Association of Chewing Gum Manufacturers, Rosebank, Staten Island, New York

• OBITUARIES •

Dr. Dolph D. McHenry
1873—1939

Complying with the duties and traditions of our profession, we come uow to take part in a memorial service dedicated to our departed brother, Dr. Dolph D. McHenry of Oklahoma City.

Boru in Illiuois, June 9, 1873, Dr. McHenry was reared in Nebraska, to which state his parents removed during his childhood. He died December 28, 1939.

Iu 1897 thc degree of Doctor of Medicine was conferred upon him by University Medical College, Kansas City, Missouri. In that institution one of his teachers was the late, celebrated, Dr. Jabez N. Jackson.

Following his graduation in medicine, he located at Cushing, I. T., and was a general practitioner there until 1909. In the meantime Indian Territory and Oklahoma Territory were merged in the formation of the State of Oklahoma (1907).

Iu 1909 he decided to prepare himself for special work in Eye, Ear, Nose and Throat. To that end he took a course of stndy in Vienna, and then located at Oklahoma City where he speut the remainder of his life. Through his zeal, earnestness and iudefatigable industry, he qnickly attained prominence in his new field to the extent that he soon had a wide and enviable reputation that marked him as one of the more progressive medical men of the State until he was suddenly incapacitated by an attack of coronary thrombosis in 1931.

Then followed a long, enforced period of rest. For eight years he adapted himself to new and strange requirements—requirements that forbade activity in connection with the work that he loved. How earnestly and uncomplainingly he tried to adapt himself to this long period of inactivity made all of us marvel at his patience and apparent resignation. To every one who knew how mnch he loved work and how he despised idleness; to every one who sensed the struggles of the restless spirit in a frail body, it was a touching exhibition of patience and good sense; of fortitnde, of courage —aye, of bravery in the preseuce of au implacable foe only half hidden from him.

Dr. McHenry was a consistent member of County, State and National Medical organizations. He was a member of Oklahoma City Academy of Medicine, and au early registrant of the American Board of Opthalmology.

He was a modest man; he was modest and kind and courteous in his contacts with his fellows of the medical profession. In professional meetings he spoke but seldom, but wheu he did speak his statements were brief, concise, constructive. He was very typically a physician who knew how "to listen and learn."

He was a good citizeu, uot because of fear or force, but becanse he tried to do what was right.

This brother of onrs was a good husband, a good father, and a good grandfather.

Nothing else need be said. When these brief statements are put together and added each to the other, they make a picture of a man who "deserves well" of his family, his country and his profession.

This, then, is the legacy that he left. Let those of us who knew him remember him with gratitnde and affectiou.

This is the legacy that he left, and, with profonnd condolences, we send a heart-felt record of it to his wife, his children, and his grandchildren.

LEROY LONG, Chairman,
J. T. MARTIN,
L. J. MOORMAN,
Committee, Oklahoma County Medical Ass'n.

Dr. William B. Hall

Death from a sudden heart attack claimed Dr. William B. Hall, pioneer Cimarron Conuty physician, January 11 at his home in Boise City. He was 84 years of age, and had retired from active practice of medicine.

Doctor Hall came to Cimarron County in 1914 from Woodward County, where he had practiced for many years. He was County Health Superintendent of Cimarron County for several years. He entered the medical profession in 1882, and practiced in Iowa, Kansas, Arkansas and Oklahoma.

Surviving are his widow; three sons, Dr. Harry B. Hall of Boise City, J. Ivan Hall, R. F. Hall of Boise City; and one daughter, Mrs. Charles R. Alexander of Woodward.

Funeral services were conducted January 14 at the Boise City Methodist church, with interment in the I. O. O. F. cemetery in his home city.

Pediatrics Course Begins First Circuit February 19

The Post-Gradnate Course in Pediatrics will begin February 19 in Northeastern Oklahoma. The first circuit will include Miami, Vinita, Claremore, Bartlesville, and Tulsa as teaching centers. To date, seventy-five doctors in this circnit have registered for the conrse.

The Post-Graduate Committee has secured the services of Dr. Wayne A. Rnpe, Dr. Peter G. Danis, and Dr. Stauley L. Harrisou, all of St. Louis, Missonri, as instructors for the first circuit. Dr. Rupe will give the first four lectures, Dr. Danis the fifth and sixth, and Dr. Harrison the last four. The instructors for the future circuits will be announced as soon as possible.

The fee for the conrse will be $6.00 which will iuclnde the lecture manual, and a certificate of attendance to those physicians who attend seventy per ceut of the lectures.

The instructors will be available for lay lectures on child care. Any groups desiring to avail themselves of their services should make arrangements with the Secretaries of their County Medical Societies. These lecturers to the laity are without cost.

Further information may be obtained by writiug the Committee on Post-Graduate Education, 210 Plaza Court, Oklahoma City.

District Councilor Meetings

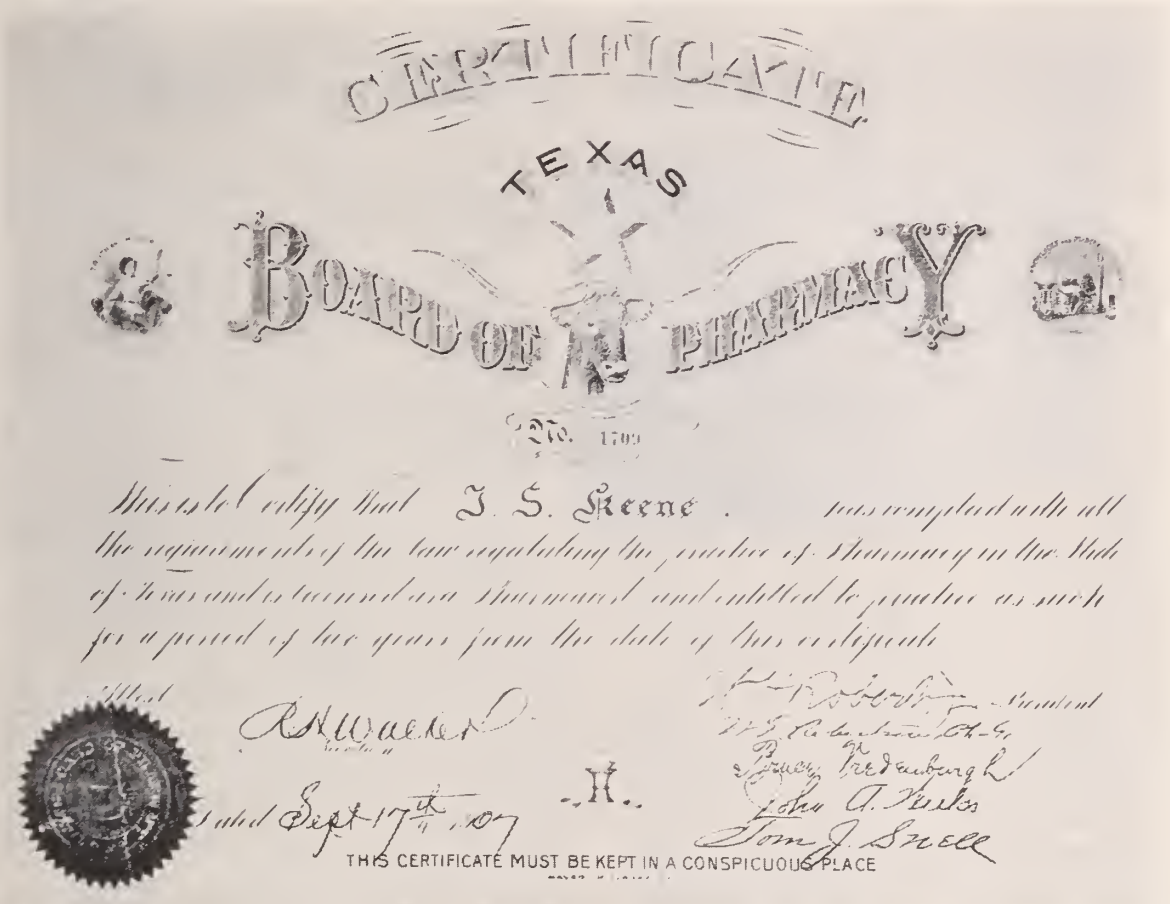
An invocation that is destined to become very popnlar was inaugnrated the evening of January 29, when a meetiug of the doctors of the first councilor district was held iu Sayre. Dr. V. C. Tisdal, councilor for district one was in charge of the meeting. Through the efforts of Dr. Tisdal, and Dr. H. K. Speed, president of the Beckham County Society, who acted as hosts, over forty doctors from the counties in the district were iu attendance.

The entire program was devoted to a report by Dr. W. A. Howard of the business affairs of the Association, together with a resume of the activities of the Association during the first uiue months of his administration.

The following evening, a meeting of the doctors of district two was held in Cherokee with a fine representation of the doctors of that district in attendance. Dr. O. E. Templin, councilor of district two, opened the meeting and introduced Dr. H. E. Huston, President of the Alfalfa County Society, who presided the rest of the evening. Program details presented at the Sayre meeting were carried ont, with Dr. Howard speaking on Association activities.

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CERTIFICATE

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No. 1709

This is to certify that J. S. Keene . . . has complied with all the requirements of the law regulating the practice of Pharmacy in the State of Texas and is therefore duly licensed and entitled to practice as such for a period of two years from the date of this certificate

Attest R. H. Walker Secretary

Issued Sept 17th 1907 — H. —

President

Examiners

John A. Kerlin

Tom J. Sneed

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FIRST TEXAS CHEMICAL MFG. CO.

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Intangible Personal Property Tax Law Information

Many inquiries have been received for information relative to the provisions of the Intangible Personal Property Tax Law that became effective in the state January 1. Limited space prevents the publishing of the entire law and the rules and regulations made by the Oklahoma Tax Commissiou.

The ultimate interpretatiou of the law will of course be made by the courts of the state and, until such time as this procedure is accomplished, it will be necessary for all citizens to follow the law as interpreted by the office of the Attorney General, and the rules as made by the Oklahoma Tax Commission.

The office of your Association does not believe it possible to give you a hard and fast rule to follow in makiug returns. However, there are certain definite points of the law as brought out by the rules and regulations which everyone should consider. The major ones are given iu the following outline.

RULES AND REGULATIONS

ARTICLE I.

Definition of Term, "Intangible Personal Property"

The term "intangible persoual property," as defined by the Act, includes property snbject to taxation, and also property which is exempt. The term "intangible persoual property" means and includes the following:

1. Money and cash on hand, including currency, gold, silver and other coin, and any other species of money which is legal tender in the Uuited States or any other country.
2. Bank drafts, certified checks and cashier's checks.
3. Other cash items, including personal checks, bills of exchange, customer's drafts, travelers checks, money orders, and all other forms of cash items which are acceptable for deposit in any bauk.
4. Money on deposit, includiug certificates of deposit, and any other form of demand or time deposit in any bank, trnst company, insurance company, postal savings account or any other depository of money.
5. Accouuts and bills receivable, including brokerage accounts and other credits, whether secured or nusecured. This includes inter-company accounts, advances to officers or stockholders of a corporation or other business organization, and advances to affiliated or subsidiary corporations or any other persou or firm to whom such advances may have beeu made.
6. Bonds, promissory notes, debentnres and all other evidences of debt, whether secnred or unsecured, except notes, debentures and other evidences of debt secured by real estate mortgages which are subject to the mortgage registration tax under Sections 12351 to 12362, inclusive, O. S. 1931.
7. Shares of stock or other written evidence or proportional shares of beneficial interests in corporations, joint stock companies, associations, syndicates, express or business trusts, special or limited partnerships, or other business organizations.
8. All interest in property held in trust or on deposit within or without this State, and whether or not evidenced by certificates, shares, or other written evidence of beneficial ownership.
9. Final judgments for the payment of money.
10. All annuities and annuity contracts.

ARTICLE II.

Exemptions and Exceptions

All property defined as "intangible personal property" is subject to taxation under the Act, except such property as is exempt, or is excepted from the provisions of the Act.

Property exempt from intangibles taxation under the express provisions of the Act is as follows:

A. Property Exemptions:

1. Obligations of the United States which are exempted from State taxation by any law of the United States. This includes all bonds of the Uuited States and all accounts payable by the United States.
2. Obligations of the State of Oklahoma and political subdivisions thereof, including all bouds, notes, interest bearing warrants, accounts and judgments issued or payable by the State of Oklahoma, any county within the State, or any city, town, township or school district within the State.
3. Shares of stock in corporations, companies, and other business organizations organized under the laws of Oklahoma, which pay to the State of Oklahoma, or to any of its political subdivisions a property tax upon property located within this State.
4. Shares of stock in corporations, companies and other business organizations organized under the laws of any other State, domesticated in and paying to this State an annual franchise tax, and paying to the State of Oklahoma, or to any of its political subdivisions a property tax upon property located within this State.

Shares of stock in foreign corporations, companies or other business organizations are taxable unless all three requirements for exemption have been met; namely, (a) domestication in Oklahoma, (b) payment for the current year of a franchise tax under the Corporation License Tax Act, and (c) payment for the current year, to this State or some of its political subdivisions, of a property tax upon property located within this State.

(The Oklahoma Tax Commission will furnish the various county assessors and county boards of equalizatiou with lists of corporate stocks which are exempt under this provision. These lists will also be available to taxpayers upon request).

5. Shares or other written evidence of proportional beneficial interests in joint stock companies, associations, syndicates, express or business trusts, special or limited partnerships, which pay to the State of Oklahoma or to any of its political snbdivisions a property tax on any property located within this State.
6. All interests in property held in trnst or on deposit within this State, and whether or not evidenced by certificates, shares, or other written evidence of beneficial ownership, where there is paid to the State of Oklahoma or to any of its political snbdivisions a property tax upon the property so held in trust or on deposit.

B. Ownership and Use Exemptions:

1. All property of the United States, and of this State, and of the counties, municipalities, and school districts of this State.
2. All property used exclnsively for religious and charitable purposes within this State.
3. All property of scientific, educational and benevolent institutions, colleges and societies created under the laws of this State, provided such property is devoted solely to the appropriate objects of these institutions within this State.



MUSKOGEE ARTIFICIAL LIMB AND APPLIANCE CO

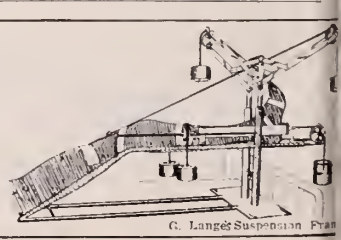
G. LANGE, MGR.

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G. Lange's Suspension Fram

STUDIES IN THE AVITAMINOSES

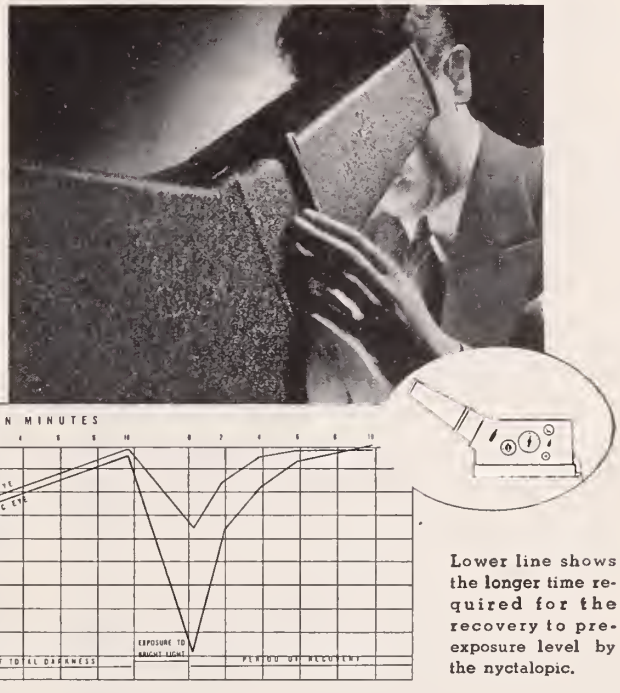


This page is the second of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A two-page insert on the same subject appears in the February 17 issue of The Journal of the American Medical Association.

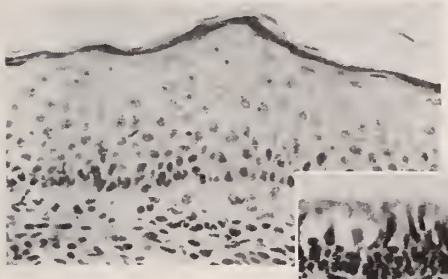
Manifestations of Vitamin A Deficiency

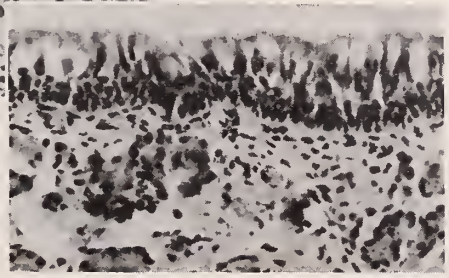
One of the early manifestations of vitamin A deficiency is nyctalopia, a loss of visual acuity in dim light. While several pathologic states (retinitis pigmentosa, toxic amblyopia, detachment of the retina) also produce night blindness, vitamin A deficiency is probably the most frequent cause. After exposure to the blinding glare of a bright light the normal eye adapts itself relatively quickly to lowered illumination. In nyctalopia due to vitamin A deficiency, the time required for recovery of visual acuity is longer.

In otherwise normal eyes, measurement of capacity for dark adaptation by means of the biophotometer has been suggested as a method of discovering vitamin A deficiency.



Lower line shows the longer time required for the recovery to pre-exposure level by the nyctalopic.





Above, stratified, keratinizing epithelium of the turbinate mucous membrane of a vitamin A deficient monkey; at right, normal mucosa.

Pathologic epithelial changes produced by vitamin A deficiency are illustrated by the photomicrographs of turbinate mucous membrane taken from normal and vitamin A deficient monkeys. The progressive pathologic process consists of atrophy of the epithelium, reparative proliferation of the basal cells and finally, as depicted in the upper photograph, replacement of the normal by a stratified, keratinizing epithelium.

UPJOHN

C. Lieu Tax Exemptions:

1. All property of State and National banks, trust companies, and Morris Plan companies which are subjected to a tax measured by or according to net income.

2. Notes, debentures and other evidences of debt secured by real estate mortgages which are subject to the Mortgage Registration Tax under Sections 12351-12362, Oklahoma Statutes 1931. (Such bonds, notes, notes and debentures are not specifically exempted by the Act, but are exempt because the definition of the term "intangible personal property" in Section 1 of the Act specifically excluded such property).

ARTICLE III.

Other Property Not Taxable

Other property which ordinarily might properly come within the term "intangible personal property," but which is not subject to taxation under this Act, because it is not included in the statutory definition of "intangible personal property," includes the following:

1. Tax sales certificates on real estate located within this State.
2. Cash surrender value of life insurance policies.
3. Oil and Gas Leases.
4. Oil and Gas Royalty interests.

In addition, intangible property of foreign insurance companies is not taxable under this Act, as foreign insurance companies pay a two per cent gross premiums tax which is in lieu of other forms of property taxation of such intangibles.

ARTICLE V.

Rate of Tax and Disposition of Proceeds

The rate of tax is the same in all counties upon the same classes of property. The rates are as follows:

A. Two mills upon each dollar of money on hand, money on deposit, and other cash items as defined in Subdivisions (a) and (b) in Section 1 of the Act, and as required to be listed under Subdivision 1, Items 1 to 4, inclusive, in OTC Form 940, which is the prescribed form of assessment list of intangible personal property.

B. Four mills upon each dollar of all other intangible personal property, as defined in Subdivisions (c) to (h), inclusive, of Section 1 of the Act, and as required to be listed under Subdivision 2, Items 6 to 12, inclusive, in OTC Form 940.

ARTICLE VI.

Basis of Valuation

All intangible personal property shall be assessed at its fair cash value, estimated at the price it would bring at a fair voluntary sale, as of January 1 of each year. Every county assessor and every county board of equalization is required to enforce this provision of the law to the fullest possible extent. The fact that real and personal property taxable under the general ad valorem tax laws may be assessed at less than its actual value is no reason why intangible personal property should also be underassessed, especially since it receives the benefit of a low preferential rate.

ARTICLE XV.

Tax Ferrets

Under the provision of Section 13 tax ferrets are not permitted, after January 1, 1940, to have anything to do with the assessment of intangible personal property. Tax ferrets are not permitted to take any action to attempt to have intangible personal property assessed after that date, and are not permitted to examine any of the reports or records relating to the assessment of such property.

ARTICLE XVI.

Assessment of Omitted Property

Section 13 prevents the assessment of omitted intangible personal property for any year prior to 1940, after January 1, 1940. Therefore any intangible personal property which has escaped taxation for the year 1939 or any prior year cannot be assessed or taxed unless the assessment is made before January 1, 1940. Any intangible personal property which is assessed before that date for any prior year shall be assessed according to the procedure authorized for assessment of omitted property under the regular ad valorem tax laws, and shall be taxed at the rates which were applicable to such property in the year for which such omitted property is taxed.

Any intangible personal property which is not assessed for the year 1940 or any subsequent year, shall, upon discovery, be assessed in the same manuer as any other real or personal property which might escape assessment under the regular ad valorem tax laws. However, the tax rates provided by the Intangibles Tax Act will apply.

Any person who lists intangible personal property shall report the par or face value of all property listed as well as the actual value. In any case where the taxpayer fails to list the full par or face value of any class of intangible personal property owned by him, the difference between the amount of such intangibles actually owned, and the amount listed, constitutes omitted property and shall be assessed upon discovery of the omission.

Penalties

Various penalties are provided by the Act, some of which apply to the taxpayer and some to the officials administering the Act.

Section 8 provides a 100 per cent mandatory penalty for failure of the taxpayer to list any taxable property on or before March 1st of each year. (On or before the last day of February in the case of railroad and public service corporations). This is a tax penalty and not a valuation penalty, and a column is provided on the tax rolls for the addition of such penalty. It is mandatory that this be applied in every case where the taxpayer lists his property after March 1, (after the last day of February in the case of railroad and public service corporations) and also in every case where an omitted property assessment is made by the county assessor, county board of equalization or State Board of Equalization. The penalty of One Dollar under the general ad valorem tax laws for delinquent assessments is not applicable to intangible personal property.

Section 12 provides a penalty for the refusal of any person to list his property, or furnish any necessary information relating to his property, upon written demand of the county assessor or Oklahoma Tax Commission. Any person who refuses, upon such written demand, to furnish such information or make any list or statement required by the Act, shall be guilty of a misdemeanor, and upon conviction shall be punished by a fine of not to exceed $500, or by imprisonment in the county jail of not to exceed six months, or by both such fine and imprisonment.

Section 16 subjects county assessors and county boards of equalization to the penalty of removal from office for failure to assess intangible personal property at its fair cash value estimated at the price it would bring at a fair voluntary sale, and also for failure to perform other duties of the office as fixed by the Act.

Section 17 provides that any person who divulges or discloses any information from intangible tax reports and records, contrary to the provisions of the Act, shall be guilty of a misdemeanor, and, upon conviction, shall be punished by a fine of not to exceed $500 or by imprisonment in the county jail for not to exceed six months, or by both such fine and imprisonment.

In addition to the penalties specifically provided by the Act, Section 12601, Oklahoma Statutes, 1931, applies also to the listing of intangible personal property. This Section is self-explanatory and is as follows:

> "If any person shall wilfully make or give under oath or affirmation, a false list of his taxable property, or a false list of the taxable property in use or possession or under his control, and required by law to be listed by him, or place false value thereon, such person shall be deemed guilty of perjury and upon conviction thereof shall be punished therefor as is by law provided for the punishment of perjury."

Wagoner Hospital Bill and The President's Message

Following is a copy of a message from the President to the Congress of the United States (House Document 604; Congressional Record, January 30). Following the receipt of the message, Senator Wagner, on behalf of himself and Senator George, of Georgia, introduced Senate Bill 3230 "to promote the uatioual health and welfare through appropriation of funds for the construction of hospitals," which was referred to the Senate Committee on Education aud Labor. Repreaentative Lea, of Califoruia, iutroduced a companion bill in the House of Representatives, H. R. 8240, which was referred to the House Committee on Interstate and Foreign Commerce.

The President's Message

To the Congress of the United States:

In my special message to the Cougress ou January 23, 1939, I expressed my conceru over the inequalities that exist among the states as to health services and resources with which to furuish such services. With that message I transmitted the report and recommendations on natioual health prepared by the Interdepartmental Committee to Coordinate Health and Welfare Activities and recommended it for careful study by the Congress.

Conditious described a year ago are substantially unchanged today. There is still need for the federal goverument to participate in strengthening and increasiug the health security of the nation. Therefore, I am glad to know that a committee of the Congress has already begun a careful study of health legislation. It is my hope the such study will be continued actively during the present session, looking forward toward constructive action at the next. I have asked the Interdepartmental Committee to Coordinate Health and Welfare Activities to continue its studies.

In order that at least a beginuing may be made I now propose for the cousideratiou of the Congress a program for the construction of small hospitals in needy areas of the country, especially in rural areas, not now provided with them. Hospitals are esseutial to physicians in giving moderu medical service to the people. In mauy areas present hospital facilities are almost uonexistent. The most elementary health needs are not being met.

The provisiou of hospitals in the areas to which I refer will greatly improve existing health services, attract competent doctors and raise the standards of medical care in these communities. The new hospitals should serve the additional purpose of providing laboratory and other diagnostic facilities for the use of local physicians, as well as accommodations for local health departments.

The proposed hospitals should be built only where they are most needed; they should not be constructed in communities where public or private institutions are already available to the people in need of service even if these institutions are not up to the highest standards. To insure proper location and good standards of operation, approval of hospital construction projects should be given by the Surgeon General of the Public Health Service, with the advice of au advisory couucil consisting of outstanding medical aud scientific authorities who are experet in matters relating to hospital and other public health services.

Projects proposed for consideratiou should be submitted by respousible public authorities and should include assurance that adequate maintenance will be provided. Approval of projects should be preceded by careful survey of existing local hospital facilities and needs. Standards for organization, staff and continuing operation should be established by the Surgeon General, with the advice of the advisory council. A competent hospital staff and satisfactory staudards of service should be required, includiug medical, surgical and maternity service. When indicated, special provisions should be made for the care of the tuberculous. Iu mauy areas of the South, the present acute needs for the care of Negro patients should also be met.

I suggest that these hospitals be simple, fuuctioual structures, utiliziug inexpensive materials and constructiou methods. The facilities of the Federal Works Agency should be utilized in the planniug and execution of the hospital projects. Title to these institutions should be held by the federal goverument, but operation should be a local financial responsibility.

I recommeud to the Congress that euabling legislation for this program be enatced and that a sum of between $7,500,000 and $10,000,000 be appropriated to the Public Health Service to inaugurate the program during the next fiscal year.

I am coufident that eveu this limited undertaking will bring substantial returns in the saviug of lives, rehabilitation of workers, and increased health aud vigor of the people.

This suggestion is not a renewal of a Public Works program through the methods of grants in aid. The areas which I have in mind are areas so poor that they cannot raise their share of the cost of building aud equipping a hospital. Yet I believe that many of such communities have enough public-spirited citizens with meaus, aud euough citizens able to pay something for hospital treatments, to care for operating costs of a hospital, provided they do not have to pay anuual iuterest aud amortization on borrowed money.

Treatment in such a hospital would, of course, be available to men, women and childreu who litterally can afford to contribute little or nothing toward their treatmeut.

One of the important difficulties in such areas at the present time is that young doctors hesitate to practice general medicine or surgery because of the utter lack of hospital or laboratory facilities. Oue cauuot blame them.

In such areas also costs of constructiou are generally low and many local materials can be used. It is my belief that with the assistance of the Works Projects Administration the cost of building and equipping a hundred bed hospital can be kept down to between $150,000 and $200,000. This meaus that we could build fifty such hospitals for between $7,500,000 and $10,000,000.

This is not an ambitious project. This principle snould not be extended to governmeut gifts to communities which are financially able to build their own hospitals. It is an experiment in the sense that the natiou will gain much experience by undertaking such a project. At the very least it will save lives and improve health in those parts of the uation which need this most aud can afford it least.

Franklin D. Roosevelt.

The White House.
January 30, 1940

* * *

Text of S. 3230 Introduced by Senator Wagner

Be it enacted by the Seuate and the House of Repreaentatives of the United States of America in Congress assembled, That this Act may be cited as the "National Hospital Act of 1940."

Sec. 2. For the purpose of assisting states, counties, health or hospital districts, and other political subdivisions of the states in providing better health and medical services through the provision of needed hospital facilities to serve rural communities and economically depressed areas, there is hereby authorized to be appropriated to the Public Health Service for the fiscal year ending Juue 30, 1941, the sum of $10,000,000 and

*Reprinted from the Journal of the American Medical Association, February 10, 1940.

for each fiscal year thereafter such sums as the Congress may deem necessary for carrying out the purposes of this act. Amounts appropriated under this act shall be available until expended.

Sec. 3. States, counties, cities, other political subdivisions or parts thereof alone or in combination wishing to participate in the benefits contemplated by this act shall make application to the Surgeon General of the Public Health Service (hereinafter referred to as the Surgeon General). Said applications shall contain information necessary to establish the existence of need for hospitals, to give assurance acceptable to the Surgeon General that such hospitals will be made available under appropriate conditions to all groups of the population, will be maintained in good repair, and will be utilized in furnishing service of satisfactory quality, in accordance with regulations hereinafter authorized to be prescribed.

Sec. 4. There is hereby established the National Advisory Hospital Council (hereinafter referred to as the "Council") to consist of the Surgeon General as chairman and six members to be appointed by the Snrgeon General with the approval of the Federal Security Administrator. The six appointed members shall be selected from leading medical or scientific authorities who are outstanding in matters pertaining to hospitals and other public health services. Each appointed member shall hold office for a term of three years except that (1) any member appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed for the remainder of such term, and (2) the terms of office of the members first taking office shall expire, as designated by the Surgeon General at the time of appointment, two at the end of the first year, two at the end of the second year, and two at the end of the third year after the date of the first meeting of the Council. No appointed member shall be eligible to serve continuously for more than three years but shall be eligible for reappointment if he has not served as a member of the Council at any time within twelve months immediately preceding his reappointment. Each appointed member shall receive compensation at the rate of $25 per day during the time spent in attending meetings of the Council and for the time devoted to official business of the Council under this act, and actual and necessary traveling and subsistence expenses while away from his place of residence upon official business under this act.

Sec. 5. The Council is authorized to advise the Surgeon General with reference to the carrying ont of the provisions of this act, including:

(a) The review of applications for hospitals submitted in accordance with and meeting the requirements of Section 2 and recommendation of such projects as in its opinion are needed, will be adequately maintained, and otherwise will fulfill the requirements of this act;

(b) The formulation of standards which are necessary to insure proper conduct of the hospitals and care of persons served by the hopsitals;

(c) The formulation of rules and regulations necessary to carry out the provisions of this act;

(d) The review of reports and inspections and, when necesssary, the making of inspections with reference to professional service and standards of maintenance of the hospitals.

Sec. 6. In carrying out the pnrpose of this act, the Surgeon General is authorized and directed, after consultation with the Council:

(a) To conduct, assist and foster stndies and surveys with respect to needs for hospitalization and problems of hospital operation;

(b) To approve hospital projects, to designate the location, type, equipment and size of hospitals, and to allocate available funds to such approved projects;

(c) To provide training and instruction of personnel who will be required in connection with the hospitals;

(d) To cooperate with state and local health and welfare authorities and with professional agencies;

(e) To secure reports and to make inspections with respect to professional service and standards of maintenance of the hospitals and other matters pertinent to carrying out the purposes of this act;

(f) To adopt such additional means as may be found necessary or appropriate to carry out the provisions of this act, including the safeguarding of the quality of service furnished in hospitals;

(g) To make, with the approval of the Federal Security Administrator, such rules and regulations as may be necessary to carry out the provisions of this act;

(h) To lease hospital projects when completed to the applicant for an indefinite period, the consideration for such lease being the maintenance and operation of said hospital in accordance with the provisions of this act. If at any time said mantenance and operation by the applicant shall fail to meet such provisions, the lease shall be terminated by the Surgeon General on six months' notice.

Sec. 7. When a hospital project has been approved by the Surgeon General, in accordance with the provisions of this act, it shall be certified by the Federal Security Administrator to the Federal Works Agency for construction and there shall be allocated and transferred to the Federal Works Agency, out of funds appropriated pursuant to this act, so much of the appropriation as may be determined to be available for the project, and the Federal Works Agency is authorized to expend such sums for the planning, execution and construction of the project and pertinent facilities, including administrative expenses, site acquisition, the preparation of working drawings and specifications, award of all necessary contracts and supervision of construction; and the Federal Works Agency is further authorized to expend out of appropriations available to it, in accordance with the purposes thereof, such sums as may be necessary for the completion of the project but without regard to specific limitations imposed on the use thereof. Title to the properties so constructed and to the equipment installed therein, and to the land on which they are located, shall be in the United States.

Sec. 8. The Federal Security Administrator is authorized to accept on behlaf of the United States gifts of money, equipment and land to be ntilized in carrying out the purposes of this act.

Sec. 9. The President is authorized to allocate from funds appropriated pursuant to this act, for the fiscal year ending June 30, 1941, a sum for all necessary expenses of the Public Health Service in administering the provisions of this act, including the training of personnel; and there is hereby authorized to be appropriated in each succeeding fiscal year such amounts as the Congress may deem necessary for such purpose.

Sec. 10. (a) There is hereby authorized to be appointed in the Public Health Service, in accordance with applicable law, such additional commissioned officers and other personnel as may be necessary in carrying ont the provisions of this act.

(b) On recommendation of the Surgeon General, the Federal Security Administrator shall submit to the Bureau of the Budget on or before September 15 of each year a list of approved hospital projects under this act and cost estimates thereof, together with such other data as may be necessary for the preparation of the budget estimates.

(c) This act shall not be construed as superseding or limiting (1) the functions, nnder any other act, of the Public Health Service or any other agency of the United States relating to the prevention, diagnosis and treatment of disease; or (2) the expenditure of money therefor.

(d) The term "state" as used in this act shall include also the territories and insular possessions of the United States.

(e) The term "hospital" as used in this act shall include the physical facilities necessary for the prevention, diagnosis or treatment of disease, and for the protection of the public health.

(f) The Surgeon General shall include in his annual report for transmission to Congress a full report of the administration of the act, including a detailed statement of receipts and disbursements.

(g) This act shall take effect thirty days after the date of its enactment.

Heart Disease Patients Encouraged

A word of encouragement for those who have suffered from coronary thrombosis or occlusion (in which obstruction by a blood clot of an artery blocks the supply of blood to the muscles of the heart) is given in The Journal of the American Medical Association for February 10 by William Hall Lewis Jr., M.D., New York, in his report of the case of a business man who has resumed an unusual degree of physical activity for more than five years following an acute and severe attack of the ailment.

Until recently, Dr. Lewis points out, the condition was considered "immediately and potentially dangerous to life." It is now realized that evaluation must be based on the degree of organic damage resulting from the occlusion.

The subject of the author's report had his original attack when he was 43 years of age. The history of the case follows:

During the three weeks before the acute attack there had been seven or eight periods of discomfort below the breast bone. This usually occurred at the end of a day's work and lasted several minutes. The patient was indulging in athletics and leading an active, intense business life. His attack occurred during the forenoon.

The convalescent program was rigorously followed. It included seven weeks of complete rest in bed in the hospital. The patient remained at home for one month, foregoing business but undertaking physical activity by gradually increasing walks. He then spent six weeks in a sunny clime; usually twelve of the twenty-four hours were spent in bed and lying about on the beach in the morning.

Activities since then have slowly but steadily increased. Full, normal business activity was resumed in two years' time.

Smoking was dropped completely on hospitalization and has never been started again. He has had no coffee at any time, very weak tea irregularly and moderate alcohol irregularly.

Beginning one year after convalescence the following activities have occupied the subject: flying (as passenger and pilot) at various altitudes up to 15,000 feet, dancing, swimming and skiing each winter at altitudes up to 10,000 feet. All this has been accomplished apparently without detriment.

"This report," Dr. Lewis says, "is published not to stimulate others who have suffered from coronary occlusion to indulge in unusual endeavor but to encourage them in expectation of being able to pursue normal activities without too severe restrictions. The range of activities can be gaged only according to the capacity of the individual."

Another example of the wide latitude for exercise that may be possible for those with heart disease is contained in the same issue of The Journal in the report of two Johannesburg, South Africa, physicians on the case of a marathon runner.

Ernst Jokl, M.D., and M. M. Suzman, M.D., relate their experience with a man suffering from a heart disorder in which narrowing of the mitral valve (on the left side of the heart and controlling the flow of blood to the aorta) resulted in improper closing, thus causing the blood in the aorta (the large artery leading from the heart) to flow backward. On examining him before a marathon race in which he was to compete, the authors found that he had heart murmurs during both contraction and dilation of the heart. Although they advised the patient against participation in the race, he stated that he had run in similar races on many occasions without ill effects. He ran in this and subsequent races, and his physical condition, the authors say, "continues to be excellent." However, they report that on three occasions the patient has had typical attacks of circulatory collapse.

"The significance of this case is worthy of note in view of current opinions on the alleged dangers of exercise to persons suffering from valvular disease of the heart," the authors declare. "The recently adopted more liberal interpretation regarding the outcome of systolic murmurs (those occurring during the contraction of the heart) may also be tenable with regard to uncomplicated valvular heart disease presenting diastolic murmurs (those occurring during the dilation of the heart)" when these are due to such causes as were found in this case, or to a backward flowing of the blood in the aorta, of rheumatic origin.

Ends 35 Years of Service

The importance of the Council on Pharmacy and Chemistry of the American Medical Association in furnishing expert medical opinion in connection with the carrying out of the new Food, Drug and Cosmetic Act is emphasized by an editorial in The Journal of the Association for February 10 which summarizes the Council's accomplishments on the completion of its thirty-fifth year.

While it might be supposed that with the enactment of the new law there would remain little need for the Council's work, the editorial points out that the importance of this act is mainly in the field of drugs sold for self medication and that Congress did not give the Food and Drug Administration power to determine whether or not a drug is a worth while addition to the medical equipment.

Describing the work of the Council, the editorial says that its first task was to expose the most extraordinary of the deceptions practiced on the medical profession. Then came the more serious task of passing on proprietary drugs detailed to the medical profession. Valuable products were listed in New and Nonofficial Remedies, which was originally a column of The Journal and was later expanded into a book to which periodic additions were made as the Council's scope widened. Products are admitted according to a set of rules published for the information of physicians and manufacturers. "Remuneration in any form is never accepted for the consideration of submitted preparations," the editorial states.

While the rules now governing the acceptance or rejection of remedies are practically the same as those adopted in 1905, the editorial says, "an additional rule was adopted about fifteen years ago to the effect that concerns whose policies were contrary to scientific medicine and inimical to the best interests of the public and the medical profession would not be recognized by the Council.

"Advertising claims employed by manufacturers of drugs for products accepted by the Council have, in the main, attained standards of accurateness and truthfulness not found in any other field of marketing or in the entire medical world outside the United States. More and more physicians ask detail men whether or not their proprietary products have been accepted by the Council and if not, why not.

"Those firms which have been following the leadership of the Council have already found that it is much easier to comply with the new Food, Drug and Cosmetic

Act and the Wheeler-Lea Act in the case of their accepted medicaments than have some firms which have tried to ignore the Council by extolling nonaccepted preparations.

Announce Prize Award Rules

Notice of the Prize Award Contest of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, Inc., has been made by James R. Bloss, M.D., Secretary. Rules governing the award are as follows:

(1) "The award which shall be known as 'The Foundation Prize' shall consist of $150.00."

(2) "Eligible contestants shall include only (a) interns, residents, or graduate students in Obstetrics, Gynecology or Abdominal Surgery, and (b) physicians (with an M.D. degree) who are actively practicing or teaching Obstetrics, Gynecology or Abdominal surgery."

(3) "Manuscripts must be presented under a nom-de-plume, which shall in no way indicate the author's identity, to the Secretary of the Association together with a sealed envelope bearing the nom-de-plume and containing a card showing the name and address of the contestant."

(4) "Manuscripts must be limited to 5000 words, and must be typewritten in double-spacing on one side of the sheet. Ample margins should be provided. Illustrations should be limited to such as are required for a clear exposition of the thesis." Submits copies of Thesis and illustration to Secretary.

(5) "The successful thesis shall become the property of the Association, but this provision shall in no way interfere with publication of the communication in the Journal of the Author's choice. Unsuccessful contributions will be returned promptly to their authors."

(6) "All manuscripts entered in a given year must be in the hands of the Secretary before June 1st."

(7) "The award will be made at the Annual Meetings of the Association, at which time the successful contestant must appear in person to present his contribution as a part of the regular scientific program, in conformity with the rules of the Association. The successful contestant must meet all expenses incident to this presentation."

(8) "The President of the Association shall annually appoint a Committee on Award, which, under its own regulations shall determine the successful contestant and shall inform the Secretary of his name and address at least two weeks before the annual meeting."

Site Purchased for Library Recommended

The acquisition of a site for a new Army Medical Library and Museum Building in Washington was recommended by the President in the budget for the fiscal year of 1941, which he submitted to Congress January 4. The budget contemplates that the Congress shall appropriate $600,000 for the purchase of the site and for preliminary expenses in connection with the building to be constructed and that the site be selected on East Capitol Street, in Washington, adjacent to the Congressional Library group.

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*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.

ABSTRACTS : REVIEWS : COMMENTS and CORRESPONDENCE

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments From
LeRoy Long Clinic
714 Medical Arts Building, Oklahoma City

"Thrombophlebitis." By Alton Ochsner, M.D. and Michael DeBackey, M.D.; Journal of the American Medical Association; January 13, 1940, Vol. 114, No. 2; page 117.

These authors have written several articles on this subject in the past year. Their work has been based on that of Leriche and Fontaine who first suggested that blocking the sympathetic nerves might influence thrombophlebitis.

The concept that mechanical blocking of the venous and lymphatic systems is of primary significance in the production of the clinical manifestations in thrombophlebitis is, in their opinion, inadequate.

Based on recent clinical and experimental investigations, they believe that many of the symptoms and signs are due to vasospasm of the arterial and venous systems and that the vasoconstricting impulses originate in the thrombophlebitic segment.

As the result of vasospasm there result increased filtration pressure, relative anoxia of the capillary endothelium and diminution in the flow of lymph, all of which increase the amount of perivascular fluid.

By interrupting the vasoconstrictor impulses with procaine hydrochloride infiltration of the sympathetic ganglions, there is produced a reestablishment of the normal exchange of intravascular and perivascular fluids.

The authors have treated 15 patients with 17 thrombophlebitic processes by procaine block of the sympathetic in the past year. They say that these cases are characterized by the prompt and permanent relief of all clinical manifestations in contrast with the usual case of thromboplebitis, in which there is fever for from four to six weeks and the likelihood of persistent undesirable sequelae such as edema, varicosities and ulceration.

They have produced prompt and permanent relief of pain in all instances.

In half the cases the temperature was said to come down to normal within 48 hours and in the other half within one week.

In more than half the cases the edema completely subsided in eight days and in the remaining ones in 12 days.

Sixty per cent of the patients were discharged from the hospital as cured within eight days after the institution of this therapy.

The dramatic results obtained by these authors in the treatment of thrombophlebitis certainly deserves attention.

LeRoy D. Long.

"The Use of Sulfanilamide in the Treatment of Peritonitis Associated With Appendicitis." By Isidor S. Ravdin, Johnathan E. Rhoads, and John S. Lockwood. Annals of Surgery, January 1940, Volume III, Page 53.

The mortality of appendiceal peritonitis has not shown a general decline during recent years in spite of the numerous advances in pre- and post-operative care. However, in the clinic of the authors, the mortality in a series of 809 consecutive cases of acute appendicitis has been reduced from 1.5 per cent in the first 552 cases to .4 of 1 per cent in the last 257 cases. They believe the improvement is the result of the employment of sulfanilamide in all severe cases in the latter group. No other known factor was changed.

In their series a number of patients with very extensive peritoneal infection secondary to appendicitis recovered with, they believed, much less reaction than would have been predicted on the basis of experience with the first 552 cases.

Sulfanilamide readily diffuses into peritoneal fluid in the experimental animal. All the available evidence indicates that the peritoneum is a favorable site for the action of sulfanilamide.

They believe that the peritonitis from appendiceal rupture is non-specific and that the improvement in mortality and in the course of the disease obtained with sulfanilamide is in agreement with the concept of Dr. Lockwood that the character of the lesion is more important than the specificity of the organism in determining the effectiveness of the drug.

Incidentally they call to attention the fact that, in their series, no cases of intestinal obstruction due to adhesions were encountered since the use of suction drainage of the stomach.

It has been their practice to use sulfanilamide in all cases that have been drained and in an occasional borderline case in which a rapidly advancing process has been found at operation but in which operation has been performed before the usual indications for drainage have appeared.

They have also employed the drug preoperatively as an adjunct to the delayed method of treatment and to protect the patient from peritoneal spread in appendiceal abscess where transperitoneal drainage may be necessary.

Under the heading, "Method of Administration," they make the following statement: "In patients with spreading peritonitis in which the limits of the peritonitis extended beyond the operative field, sulfanilamide is now given in 0.8 per cent concentration in physiologic saline solution by hypodermoclysis. The dosage is usually 8 Gm. the first day and is reduced about 1 Gm. a day, the amount being varied to some extent according to the response of the patient. In patients with milder infections the usual dose is 6 Gm. the first day by month. This is gradually reduced to 3 Gm. over a period of four to seven days, and then stopped. We have not attempted to adhere to a rigid dosage schedule but cite these figures as representative of our current practice. Each day's dose is given in four installments at six-hour intervals. The blood concentration of sulfanilamide should be maintained above 5 mg. per cent and we have kept it above 15 mg. per cent in certain cases."

"Complete blood counts should be made every 24 to 48 hours. If rapid anemia or leukopenia develops, the administration of the drug may have to be discontinued."

Comment: In occasional isolated cases where we have employed sulfanilamide in this manner we gained the general impression that it was of benefit. More recently our interest has been stimulated by Dr. J. Moore Campbell who is now surgical resident on our service at the University Hospital in Oklahoma City. Dr. Campbell came to us from the post-gradnate school in Philadelphia where he was subjected to the teachings of Dr. Ravdin. The results now being obtained on our service under Dr. Campbell's direction (using Dr. Ravdin's procedure as outlined in this article) are compar-

able with those reported by Ravdin, Rhoads, and Lockwood in this article.

LeRoy D. Loug.

"Aberrant Adrenal Tumor of Upper Part of Abdomen." Report of a Case With Six Year Cure. By Stuart F. MacMillan and Judson B. Gilbert, Schenectady, N. Y. Archives of Surgery, January 1940, Volume 40, Page 77.

A white married woman 51 years of age was admitted to hospital because of intermittent attacks of nausea and vomitiug. The first attack was about a year before admission to hospital. The attacks appeared at first about ouce a month. Later they were more frequeut. They were "short" at first, but later on lasted 2 or 3 days. There was a feeliug of pressure in epigastrium but no paiu. There was "moderate" coustipation. There had beeu "slight" loss of weight. The appetite poor. Patieut had recently noticed a mass in upper abdomen.

The patient appeared well developed and "fairly well nourished."

The pulse, temperature, respiration normal. Arterial tension 140/80.

Abdomen soft. No distention. "There was a freely movable firm rounded mass in the upper and middle portion of the abdomen, slightly tender and about the size of a large orauge."

Gastro-intestinal x-ray showed no importaut abnormality with the exception that the mass appeared to be outside the gastro-intestiual tract.

Urinalysis normal three times. A fourth specimen showed a few R.B.C. aud a few W.B.C.

Hemoglobin 61 per eent, R.B.C. 3,320,000. W.B.C. 7,000, polymorphonuclears 62 per eent, lymphocytes 28 per eent.

Blood area nitrogen and blood suger within uormal limits. Blood Wassermau negative.

A surgical operation, (presumably exploratory in character, since there is no reeord of a preoperative diagnosis) was done, following a transfusion of blood. The mass was approaehed through an upper right rectus incision. There was "a nodular mass approximately 6 em. by 10 em. in the omentum just beneath and adherent to the middle of the transverse colon."

There were no evidences of metastases.

Finding it difficult to separate the mass from the transverse colon, the tumor and adherent portion of the colon "were resected iu one piece," the continuity of the bowel being reestablished by lateral anastomosis.

The pathological diagnosis was hypernephroma.

Six years after the operation the patient was in good health.

Commeuts: The reporters are to be congratulated. A six year eure after operation for hypernephroma is most remarkable.

LeRoy Long, Sr.

"The Surgical Treatment of Pain (La Chirurgie de la Douleur)." By Jean Panet-Raymond, Montreal. L'Union Medicale du Canada, volume 69, No. 1, January 1940.

This is a part of a remarkably comprehensive symposium on the treatment of pain. The symposium is divided into three parts: 1. The Medical Treatment of Pain. 2. Physio-therapy in the Treatment of Pain. 3. The Surgical Treatment of Pain.

Apparently in order to show the consensus touehing this important subject, Panet-Raymond presents a list of the subjects diseussed at the Sixteenth International Neurological Reunion at Paris iu 1937, as follows:

1. General Physiology and Pathology of Pain—A. Baudoin and H. Schaeffer.
2. Sympathetic system and Visceral Pain—Ayala (Rome.)
3. Pain as Viewed by the Psychiatrist—Nael-Peron.
4. Diaguosis of the Reality of Pain. Medieo-Legal Considerations—O. Crouzon and H. Desoille.
5. Neurosurgery of Pain—Rene Leriehe.
6. Roentgen Therapy for Pain.—J. Haguenau and L. Gally.

The author simplifies the question in this table which he designates as the plan he will follow:

1. Craino-Cerebro Meningeal Pain.
2. Pain Originating in Vertebro-Medullary Pathology.
3. Peripheral Pain.
4. Pain Resulting from Pathology of the Sympathetie System.

Under heading No. 1 he diseusses:

(1) Fractures of the Skull, direeting particular attention to the necessity of elevating a depressed fracture as soon as possible because as long as there is strong pressure on the dura mater there is severe pain.

(2) Osseous Tumors of the Skull. Osteosareoma, myeloma, aud meningeoma invading the bony wall are the most common. Pain resulting from either of them may be lancinating and terrible. If the infiltratiou is pretty well circumscribed a "Veritable Biopsy," including all the tumor and adjoining bone should be done.

(3) Meningiomata may eause severe headaehe by pressure upon contiguous nerves. Operative removal is usually advisable.

(4) Meningitis, both cerebrospinal and hemorrhagie, causes severe pain. Repeated lumbar puneture for rapid and definite decompression of the subarachnoid spaces is advised. The same is advised in trauma aud cerebral contusion with bloody cerebro-spinal fluid.

(5) Abscess of the Braiu, dne most often to contiguous infectious processes like otitis media, produces most excruciating pain, ofteu with symptoms and signs of meningitis. There should be surgical intervention in a systematic manner at the proper time.

Sometimes abscesses are multiple or diffuse, and there is little hope that an operation would be of service.

(6) Tumors of the Brain. Regardless of type or location, they are habitually aecompanied by headaehe (Quelle que soit leur localisation les tumeurs cerebrales se manifestent habituellement par des cephalees). Tumors in the posterior cerebral fossa, those of the hemispheres of the cerebellum and those encroaching upou the floor of the fourth ventricle provoke the most severe headache. The pain is not in the bone, itself, but in the structures contiguous to it.

Manifestly, the treatment of brain tumor is a proper surgical operation if tumor is approachable surgically.

Under heading No. 2 he discusses,

(1) Fractures with pressure upou the cerebrospinal axis may cause severe pain, regardless of whether the fracture is in a previously sound bony structure, or a pathological fracture associated with previous disease of the bones, such as metastatic malingnaucies, etc. In any case the treatment must be adapted to the pathology, and it may have to be surgical or otherwise.

(2) Tumors involving or encroachiug upon the cerebrospinal axis, some of them extra-medullary aud some of them intramedullary. These tumors are usually the cause of motor, sensory and trophie disturbances, most of them beiug accompanied by severe pain. Some of tnem may be approached surgically.

(3) Degenerative Lesions are mentioned, such as Chareot's disease and syringo-myelia. In general, surgical operation does not cure, but in an occasional patient may produce temporary relief.

(4) Specific Infections — tabes, meningo-myelitis, etc., may sometimes be greatly relieved by a cordotomy. In this class, however, only temporary relief ean be expected.

Under headiug No. 3 he discusses Peripheral Pain.

This is a mnch more hopeful situation. "It is one of the most eloquent chapters in neurosurgery" (Cest un des chapitres les plus eloquents de la neurochirurgie).

(1) Neuralgia of the Cranial Nerves. The most typical example is Trigeminal Neuralgia, or Tic Douloureux of the face, meaning painful spasm of the face, always on one side, only. The author gives a classical description of the "crises" when the unfortunate patient suffers the most aeute agouy imaginable. He also very sharply directs attention to the fact that it is not facial neuralgia, reminding the reader at the same time that the faeial nerve is a motor nerve.

After enumerating the many and various therapeutic procedures advised, the author endorses only two plans of treatment: First, the injection of 90 per cent alcohol into the affected branch of the trigeminal. Incidentally, he objects to injection, or attempted injection into the Gasserion ganglion, he regarding it as an intracranial procedure fraught with danger. While the injection of alcohol into the affected branch does not usually produce permanent relief, there is definite immediate relief that may last for a number of weeks or months. Second, in appropriate situations, intracranial section of the sensory root of the Gasserion ganglion. This is usually followed by permanent relief.

(2) Peripheral Neuritis in certain locations, and notably of the occipital, is relieved by the injection of alcohol. It is not advised in the more important nerves, like anterior crural (femoral) and great sciatic.

Under heading No. 4 he discusses Pain of Sympathetic Origin.

For basic investigations of the question of pain originating in the sympathetic system, much credit is given to Andre-Thomas, Guillaume, Roussy, Lhermitte and Danielopolu. Investigation was continued and practical application made of the knowledge gained by Leriche and Fontaine of Strasbourg.

Pain associated with pathology of the sympathetic nervons system is more obscure, more irregular than that associated with the cerebrospinal axis and the peripheral nerves, but is not less tenaceous. The facts concerning it must be ascertained by knowledge of anatomy and physiology and most industrions study. The author, in this connection, refers to an article by Professor Urgele Gariepy published in L'Union Medicale in 1934.

The author arranges all treatment of the morbid entities of the sympathetic system nnder six headings, to wit:

1. Infiltrations of the Ganglions.
2. Central Sympathectomies.
3. Periarterial Sympathectomies and Arteriectomies.
4. Lumbar Encephalography With the Injection of Gas.
5. Ramisection and Ganglionectomy.
6. Splanchnectomy.

(1) Ganglion Infiltration. The principal indications are angina pectoris, inoperable diseases of the spine with great pain—Potts disease, cancer, visceral crises by tumor or spasm.

(2) Periarterial Sympathectomy. Applicable in painful stumps after amputation, spasm of arteries of the legs, Erythmomelalgia, Raynaud's disease, Buerger's disease.

Arteriectomy suppresses the initial cause by interrupting the net work of sympathetic fibres.

(3) Lumbar Encephalography with the injection of gas to dilate the ventricles of the brain for the relief of headache, cause undetermined, and of a rebellious character.

(4) Ramisection, Ganglionectomy, Splanchnectomy. These operations seem to act especially upon the motor constrictors, and appear to be of service in the presence of certain algic phenomena (ces operations semblent agir surtout sur les vaso-constricteurs et peuvent ainsi avoir sur certains phenomenes algiques dus a l'hyperhemie locale une action bienfaisante). "They have their indications in most of the syndromes already ennmerated."

"Finally, Splanchnectomy, as practiced especially by Max Peet, onght to give good results in essential arterial hypertension in diminishing the blood supply of the suprarenals.

Comments: In this exhaustive article the anthor makes the statement that cerebral tumors are habitually accompanied by headache (Qnelle que soit leur localisation, les tumeurs cerebrales se manifestent habituellement par des cephalees). While that is the rnle, there are distinct exceptions. For example, we have seen a boy 13 years of age whose chief complaints were complete deafness of the left ear and attacks of nausea and vomiting. There was no headache, nor was there pain in the distribution of any of the intracranial nerves. He was investigated because of the complete unexplained deafness and the attacks of nausea and vomiting which usually appeared suddenly and lasted but a short time. A neurological examination seemed to warrant a diagnosis of cerebral tumor involving the left 8th cerebral nerve. Operation disclosed an extensive glioma.

LeRoy Long, Sr.

"Clinical Experiences With Stilbestrol." By Conrad G. Collins, John C. Weed, B. Bernard Weinstein, and Frank R. Lock. American Journal of Obstetrics and Gynecology, January 1940, Volume 39, Page 117.

These authors review briefly the introduction of this new synthetic preparation with effective estrogenic properties in 1938 by Dodd of England.

Stilbestrol used in this small series of patients, when standardized by the Allen-Doisy method, 1 mg. of stilbestrol was found to have the same activity as 25,000 international units of estrone.

This is a report of 50 patients, with 19 cases of physiologic menopausal syndrome, 16 cases of surgical menopausal syndrome, 13 cases of hypoestrinism and two cases of senile vaginitis.

These authors report their results as excellent in the relief of symptoms very shortly after the inauguration of therapy. They also state that 16 of their patients had previously received estrogenic therapy with biological preparations without relief whereas they obtained proper relief from symptoms with Stilbestrol medication.

Each of their patients was individualized in giving treatment and most of their treatment so far has been intramuscular therapy and they are only recently employing oral administration. In most of their patients they found it better to give an initial dosage of 5 mg., decreasing the amount administered as the symptoms were controlled, though early in their series they employed 1 mg. intramuscularly once or twice weekly.

They discovered no definite toxic effects and no patient completely intolerant to Stilbestrol. However, approximately 60 per cent of their patients complained of nausea at some time during the treatment but the nausea was reduced upon decreasing the dosage. They also state that nausea following oral administration was frequently relieved by changing to intramuscular injections.

In only one instance was nausea sufficiently severe to cause cessation of therapy for the period of a week and then therapy was resumed without nntoward effects. It is their feeling that sodium bicarbonate should be given concurrently with Stilbestrol to reduce nausea.

From their results they feel that Stilbestrol is to be recommended because of its ease of administration, relative low cost, and the wide range of ntility. They also report that oral administration has yielded satisfactory results in those patients to whom it has been given.

They list certain recommendations about the use of the drug which follow in quotations: "Our observations regarding the administration of Stilbestrol where estrogenic therapy is indicated lead us to suggest that: (a) therapy be individualized; (b) the initial administration be by the intramuscular route and preferably in large doses (5 mg. once or twice weekly); (c) when symptoms are controlled the dosage may be reduced to 1 mg. once or twice weekly; (d) a patient adequately maintained on such dosage may have oral administration substituted for intramusenlar; (e) the dosage for oral therapy should be successful if given in a quantity equivalent to three times the previous intramuscular administration; (f) when oral administration is utilized sodium bicarbonate should be administered concomitantly."

Comment: Stilbestrol is a synthetic preparation which has very powerful estrogenic properties and I have been extremely interested in employing it npon clinical trial since last October in a reasonably large group of patients.

There can be no question of its effectiveness in the

control of symptoms in the menopausal syndromes, whether surgical or physiological.

There have been several instances of nausea and rather severe headaches in patients who have had oral administration in sufficient quantities to relieve symptoms. I entirely agree with these authors that patients are more tolerant to intramnscular injections than to oral administrations. It is also quite true that the nausea will rapidly disappear and not reappear with a reduced dosage of the drug.

With the high margin of safety of the drug demonstrated in pharmacological experimentation, and with the only moderate nausea and headache found in therapeutic use in human beings, Stilbestrol must be looked upon as a very powerful estrogenic substance which has a distinct place in the treatment certainly of the vasomotor symptoms associated with the menopause and it may be employed in certain patients with effective relief of symtoms where the usual biologic preparations have been inadequate.

However, one must well understand that there is a certain amount of nausea and headache especially when the drug is given in higher dosages by oral administration.

Wendell Long.

"Treatment of Metromenorrhagia With Testosterone Propionate." By W. C. Sturgis, A. R. Abarbanel, and D. S. Nader. American Journal of Obstetrics and Gynecology, January 1940, Volume 39, Page 102.

For the purposes of this report, the authors have selected fourteen typical cases of metromenorrhagia treated by testosterone propionate and are, in this article, chiefly concerned with the average minimal dosage necessary to control the excessive bleeding. "The immediate treatment of metromenorrhagia with testosterone propionate proved to be highly successful."

They have observed that the effects from testosterone on the endometrium are variable and that one may find all types of endometrium in the patient's controlled with testosterone, including progestional response of the endometrium, hyperplasia, and in prolonged chronic injections hypoplasia. However, these authors feel that the principal means of effectiveness of testosterone lies in its action upon the myometrinm where the intermittent rhythmic motility is inhibited and there is a direct squeezing action on the blood vessels of the myometrium, thereby reducing the flow of blood to the endometrium. (This reasoning was well substantiated in a paper read by Abarbanel in Hot Springs last September at the meeting of the American Association of Obstetricians, Gynecologists, and Abdominal Snrgeons).

The dosage of testosterone employed at any single time varied from 5 to 25 mgs. and the average minimal dosage required to lessen the bleeding materially ranged from 10 to 30 mg. "The total dosage necessary to stop the flow completely ranged from 10 to 120 mg., with an average of 40 to 60 mg. Two to four injections at intervals of two to four days were usnally found sufficient. Injections shonld not be repeated during the transient exacerbation of bleeding which frequently occurs."

"When used prophylactically, the dosage varies somewhat with the type of endometrium found premenstrually. In cases with a secretory or an interval, non-secretory picture, a total of 10 to 30 mg. of testosterone propionate given in divided doses, subcutaneonsly, in the seven to ten days before the expected period is usually sufficient to control the succeeding period. In cases of hyperplasia, 50 to 100 mg. given in divided subcutaneous doses during the last two or three weeks of the cycle usually check the tendency to excessive flow."

It will be noted that these dosages are much smaller than have been frequently employed and reported by others.

It is felt by these authors that the subcutaneous route apparently provides for a more effective per-dose action and therefore requires a smaller total dosage to achieve a therapeutic result. However, where the flow was profnse and free, the initial injection was given intramuscularly for a more rapid initial effect.

They report that the only possible sign of defeminization ever observed was loss of libido in two patients.

Comment: Abarbanel, who has done most of his work on testosterone in the Gynecological Department of Johns Hopkins University, has done much to establish this drug as an effective means of treating metromenorrhagia. In his paper, now in the press, delivered last September, he reported a much larger series of patients with an extremely high percentage of effective and definite results.

He must likewise be given credit for the best explanation of the manner in which testosterone reduces excessive uterine bleeding. He has demonstrated that the uteri have a blanched appearance and that the vessels in the myometrinm are definitely "squeezed," thereby presumably reducing the flow of blood to the endometrium.

He must likewise be given credit with others for assisting in establishing a minimal dosage to produce effective results. It is quite noteworthy that this minimal dosage is far below the dosage used by Geist to produce masculinization effects.

These authors report no defeminization except loss of libido in two patients out of 14. However, even with minimal dosages such as these, the many discussions that have been had upon this subject show that occasionally there will be slight increase in hair upon the lips.

Even with these minor disadvantages, and with due regard to the fact that none of the masculinizing effects have been permanent even with larger dosages, testosterone propionate must be looked upon as a very valuable additional means of controlling metromenorrhagia in difficnlt situations.

However, it is equally true that in the employment of any of the glandular products, very careful study should be made of the individual patient in order to determine the nature of the glandular hormone that shonld be given, the dosage to employ, and the length of time that the drug shonld be used.

Wendell Long.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
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"A Study of Cycloplegia Mydriasis by Use of Atropine, Scopolamine and Homatropine-Paredrine." Digested from a Paper read at The Chicago Ophthalmological Society, Oct. 16, 1939. Published in the Digest of the Ophthalmology and Otolaryngology, January, 1940. Original paper by James Marron, M.D., Chicago, Ill., Department of Surgery, Division of Ophthalmology, of The University of Chicago.

This investigation was undertaken to determine for Atropine and Homatropine-Paredrine: (1) the length of time necessary for the induction of complete cycloplegia and mydriasis, and (2) the length of time necessary amount of minimum range of accommodation and maximum mydriasis; (3) the duration of maximum cycloplegia and mydriasis, and (4) the length of time necessary after instillation of cycloplegia before close work could be resumed and the return to the normal range of accommodation and pupillary diameter.

Author's Procednre.—The subjects for this investigation were the students and faculty members of The University of Chicago, an exceedingly cooperative and highly intelligent gronp of patients. These individuals came to the Eye Clinic complaining of symptoms in general referable to excessive use of the eyes for near work, or merely for a check-up. Patients with ocular pathology other than refractive error were excluded from

the study. Iu all cases the corrected vision in each eye was at least 1.2.

The methods of instillation of the cycloplegic solutions and of measurements of the range of accommodation aud diameter of the pupil were the same in all cases. Before applyiug the solution the patient was requested to look down, the lower lid pulled slightly away from the globe, and the upper lid lifted well up. Then one drop only of solution at room temperature was dropped onto the eyeball above the limbus and allowed to roll down over the coruea. The regions of the punctae were held tight for at least one minute by the clock.

The diameter of the pupil was measured to the uearest .5 mm. by a Schlosser Tangent Pupillometer, the eyes fixing an object approximately twenty-five feet distant.

A Prince's Rule with a small sliding test card holder was most couvenient for measuring the range of accommodation. The test print was a six-point B 8. In the trial frame before the eye to be measured was placed a spherical lens which might well roughly approximate the patient's refraction plus a three diopter lens. For example, before a 2 hyperopic eye a plus 5 lens was placed, while before a 4 D myopic eye a minus 1 lens was placed. The subject was then coached to signal as soon as he could no longer differentiate the B 8. Immediately, each found the near point easily detected but were somewhat uncertain about the far point. However, after a few practice runs, the patient became surprisingly consistent about even the far point. The hear and far points were read off the rule to the nearest .5 cm., trausposed into diopters, and the range of accommodation determined. All iustillations and measurements were made by the writer.

Atropine Sulfate oue per cent T. I. D. Ten Drops Total.—The average age of the one hundred seven patients in the group was 22.5 years. The age range was between fifteen aud forty years. In determining the distribution of refractive error the spherical equivalent of the sphere-cyliuder combination was used. The strongest cylinder in the series was only 2.25 D. In each of these cases the measurements were made and atropine instilled at 8:00 a. m., 12:00 m., and 4:00 p. m. for three days. On the morning of the fourth day the last drop was instilled (making a total of ten), the refraction done, and the measurements again made. The patients then returned for measurements each day for two weeks in all cases, and daily thereafter in most cases.

Cycloplegic Effect.—After the instillation of the first drop of atropine sulfate, the range of accommodation was found decreased after five minutes, sharply falling in the next thirty minutes, then more slowly. This slow decrease contiuued until after the fourth drop when the full effect had been attained. Further atropinizatiou merely maintained the cycloplegia at 1.9 D range of accommodation. After the last installation the accommodative power fairly rapidly returned so that by the third day, the average patient could read newsprint. A few read by the second day, and a few not until the fourth day. After the thirteenth day a slight drop in the range was observed with a gradual rise so that by the eighteenth day slightly greater than starting range was found, an advantage soon lost. In this large series 70 per cent of eyes were within .5 D more or less of the 1.90 average. In no case was the variation more than 1.0 D. Each individual subject had reached his low level of range of accommodation at the 32nd or 48th hour reading and this level, be it 2.7 D, 1.5 D, or as the case may be, was maintained until cessation of drops.

Mydriatic Effect.—Five minutes after the atropine was placed in the eye an average decrease of .6 mm. in the pupillary diameter was found. This initial constriction was found in all the eyes in this series amouuting to .5 mm. in most cases and 1.0 mm., in the remainder. The pupil dilated so that by forty minutes there was a maximum average diameter of 7.9 mm. This was maintained throughout atropinization. However, in sixteen eyes, after six or seveu drops, the pupil was found to have decreased by .5 mm. iu diameter. In general, four to six days after the last drop the pupils reacted to light, and original pupillary diameter was observed by the twelfth day.

Atropine Sulfate one per cent T. I. D. Sixteen drops Total.—In order to discover if more prolonged atropinizatiou than ten drops in three days would give greater cycloplegia, thirteeu patients were carried through for five days, three times daily, and the refraction done on the sixth day for a total of sixteen drops of Atropine one percent. The age range of this group was eighteen to thirty-one with an average age of 22.2 years. In this smaller group after the sixth drop the range of accoumodation did not change appreciably. The range at refraction here also was 1.9 D. These patients required an average of three and a half days after the last drop to read uewsprint. The initial pupillary constriction was found here also in all cases.

Scopolamine Hydrobromide one-fourth per cent.—The average age of the twenty-one patients upon which scopolamine cycloplegia was studied was 23.3 years ranging from fifteen to thirty-seven years. Hyoscine is a very powerful, fast-acting drug under which the rauge of accommodation diminished very quickly so that maximum effect was obtained in forty minutes to a lower of 1.6 D., persisting for at least ninety minutes. The accommodative power gradually returned so that by the third day when the rauge was again 3.3 D. the average patient could read. Normal range of accommodation was present by the tenth day.

With scopolamine also there was an early constriction of the pupil observed in all but two patients. Full mydriasis of 8.0 mm. average diameter was produced in twenty minutes, lasted at least ninety minutes, and was normal by the eighth day.

Homatropine-Paredrine.—Into the eyes of this group of twenty-five patients, were instilled Homatropiue hydrobromide five per cent, five minutes later Paredrine one per cent, and five minutes later Homatropine hydrobromide five per cent, one drop only each time. The age range here was seveuteen to fifty-seven years with an average age of 28.0 years. The moderate conjunctival congestion and smarting caused by the Homatropine was promptly relieved by the Paredrine.

After the first drop the range of accommodation rapidly decreased so that the full effect was reached after fifty minutes. The range of 1.6 D was maintained thirty minutes longer after which a smooth return of accommodative power began so that after three hours the range was 2.4 D, and after six hours, when the range was 3.4 D, the patient could read. Normal accommodation was present at forty-eight hours.

After the usual early constriction, the pupil dilated to a maximum diameter of 8.0 mm. in thirty minutes where it remained for another hour. Normal pupillary diameter was found in forty-eight hours.

"A Survey of the Use of Sulfanilimide In Acute Otitis Media." Karl Musser Houser. The Laryngoscope, September, 1939.

While there can not be any definite conclusious from the data furnished, the results noted are very interesting. The author of the report furnishes the following figures:

1. Almost 90 per cent of the physicians cooperating in the survey are using sulfanilimide in the treatment of acute otitis media. It is possible that most of the enthusiasts replied to the questionnaire, while those not using the drug or those having poor results failed to respond. In this event, the percentage of favorable replies would drop greatly had a full respouse been obtained.

2. Sixty per cent of the pediatricians and otologists who have had experience with sulfanilimide believe that its nse reduces the incidence of acute surgical mastoiditis.

3. The majority believes that if used it should be used early, before mastoiditis has had a chance to develop; 58.5 per cent use the drug before the results of cultures are secured.

4. In a series of 9,667 cases, a mortality rate of 0.041 per cent, or one death in 2,417, cases was reported.

5. In cases where the pneumococcus is either found or suspected, sulfapyradine is probably the drug of choice.

6. There is growing clinical evidence to support the idea that the blood concentration is not as important as previously supposed.

7. This survey shows that the use of sulfanilimide in acute otitis media is widespread, that its use is relatively safe, and that those using the drug are as a rule enthusiastic over the results obtained; this enthusiasm, however, lacks the supporting proof of control cases.

Comment: There is always the possibility of masking the clinical course of an otogenous infection with the use of sulfanilimide and giving rise to a latent course of the disease. The complete eradication of the existing focus of infection is important. If this is not done, sulfanilimide is many times ineffective.

"A Study of Ten Cases of Deep Infection in the Neck." C. W. Pond, M.D., Pocatello, Idaho. Annals of Otology, Rhinology and Laryngology, December, 1939.

This is simply a report of ten cases. The anatomy of the region is not discussed but reference is given to Mosher's and others in regard to this. This report is interesting because of the fact that it shows that ordinary sore throats, tonsillitis, etc., may be of fatal termination. It also brings out the fact that tonsillectomies done with a local anaesthetic has hazards as grave as those with a general anaesthetic (such as lung abscess, etc.). This is true no matter how well the operation is done nor how correct the technique may be.

The author cites the report of Shapiro which includes one hundred ninety-four tonsillectomies done with a local anaesthetic. Shapiro mentions three possible sources of infection in the course of a local tonsillectomy, i. e.: 1. Injection through the tonsil tissue carrying organism from the infected tonsil itself. 2. Contamination of the needle or the solution prior to injection. 3. Infection of the mucous membrane at the site of injection.

There is another type of deep infection of the throat in which throat surgery is not an etiological factor. A. L. Beck in his report of this type of case gives as the exciting factors the tonsil, pharynx, adenoids, pharyngeal lymph nodes, mastoid, petrosa and the nose and sinuses.

The author reports his ten cases in detail, with signs, symptoms, laboratory findings, treatment and the result obtained. He summarizes his conclusions as follows:

1. That many cases of deep infections in the neck, if treated early, can be treated conservatively.

2. That peroral incision will prove satisfactory in retropharyngeal abscess.

3. That the external incision should be resorted to in all cases of infection of the parapharyngeal space where trismus and swelling are present and where tonsillectomy has not been performed. The incision may be made through the fossa when the tonsils have been removed and the fossa bulges.

4. That hemorrhage may take place from an internal incision if prompt free drainage is not obtained.

5. That most of the deep abscesses of the neck result from infection in or about the tonsil or follow tonsillectomy, particularly when local anaesthesia is used.

6. That probably case ten died from an encephalitis by bacteria being injected directly into the carotid artery, even though no evidence could be found at post-mortem examination.

"Neuromyelitis Optica." A. G. Athens, M.D., Duluth, Minnesota. American Journal of Ophthalmology, December, 1939.

A case of this character is comparatively rare. Sudden blindness occurred in a boy, age 15. There was evidently an acute diffuse myelitis. Within two days of the onset vision was so blurred that he could not read. Prominent symptoms were headaches, nausea and vomiting. He was ataxic. R.B.C. were normal; W.B.C. 20,000. Temperature normal. Other cases reported show a wide variation of findings in the fields. This case showed large central scotomata as well as loss of color sense for red and green.

A diagnosis, from the electrocardiogram, was made of sinus arrhythmia. This was wrong as soon shown by the disappearance of the arrhythmia.

One of his complaints was pain on rotating the eyes up and out. About twenty days after the onset of the blindness, the following symptoms (myelitic) developed. Weakness of the legs, uncertain gait and soreness in the lower back. Urinary retention was present, later involuntary stools. Spinal puncture showed a pressure of 19 mm. and a cell count of 180. Myelitic symptoms continued to spread upward causing the patient to lose sense of position of his extremities and have a great deal of vertigo.

Differentiating from multiple sclerosis (which it closely simulated): High degree of bilateral visual loss; the age of the patient; and no sign of relapse months later. Recovery was complete in ten weeks. (Bibliography).

PLASTIC SURGERY

Edited by George H. Kimball, M. D., F. A. C. S
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"Burn Shock." H. M. Trusler, M.D., H. L. Egbert, M.D. and H. S. Williams, M.D., Indianapolis, Indiana. A.M.A. December 16, 1939.

This article describes a method which is a radical departure from the present trend in the management of burns. It may well be understood from the investigations carried out by these workers some of the principles which they have laid down. These principles are: 1. That the toxemia previously ascribed to burned tissue probably does not exist; therefore is not responsible for death in case of burns. 2. Since toxemia does not exist it is doubtful that large quantities of fluid, that is, quantities beyond that necessary to control the blood stream concentration, should be given. 3. That the death from early burns is due to immediate or delayed shock.

Mechanism of burn shock: The chief factor in burn shock is reaction of capillaries to thermal injury. Subsequent to a burn capillaries dilate, circulation stagnates, blood plasma escapes through the injured vessels into the tissue and tissue spaces. If the burn involves a sufficiently large area, enough blood fluid is lost to cause shock and death. This is through circulatory shock due to the loss of blood.

If the burn is of such degree that the patient survives the immediate shock stage the inflammatory reaction of the capillaries persists with continued loss of blood fluid and stagnation of the circulation. With the continuance of the processes of inflammation the loss of fluid becomes generalized, extending to the liver, lungs, and finally to all parts of the body.

Water intoxication: The author next discusses water intoxication first described by Rowntree 1923. He notices a particular symptom complex in patients who ingested extreme amounts of fluid especially those patients who had diabetes insipidus who continued to drink their customary large quantities of water after urinary output had been sharply reduced by pituitary products. Rowntree then gave animals large quantities of distilled water by mouth and observed a syndrome which he called water intoxication, characterized by progressive asthenia, muscular twitchings, convulsions, coma, and death. The chief pathologic feature observed to be present was cerebral edema accompanied by a sharp reduction in the serum chlorides.

Because of the fact that enormous amounts of water were necessary in the production of this symptom complex, the subject was forgotten.

Water intoxication in relation to burn shock: With these facts in mind the authors observed burns and realized that many burns show evidence of water intoxication. A case is presented which exhibits such a phenomena. Experimental studies were carried out on dogs the results of which are given in detail, which indicates that in severe burns when large quantities of water are given without replacement of serum protein and serum chlorides the animal showed symptoms of water intoxication and died.

Further blood chemistry studies indicate that if no fluids are given that there is a marked blood concentration at death but that the continuous forcing of fluids by mouth without replacemeut of the vital elements results in water intoxication and blood laking. This latter condition was found to be best controlled by replacement of serum, transfusions and the use of normal saline. Extensive burns present extremely complex problems in management.

From this article we have gleaned some new conception of the reaction to burn shock. The first case, that is a case treated by excessive amounts of fluids chiefly in the form of water by mouth; the terminal low blood chlorides and the clinical condition of the patient seem to bear out the views of the authors that water intoxication may be a factor in the death of these patients.

The second case reported that one in which serum proteins and chlorides were controlled and played a part in the survival of a patient with a very extreme burn also bear out the fact that the forcing of fluids without control of these vital factors may be futile or even dangerous.

The local treatment of large burns should be instituted early with the thonght of preventing infections and stimulating early healing. There is no further discussion of local treatment in this paper.

Further Comment: We read this paper several times with the thought of its particular application to the management of extensive burns. We feel that a large amount of fluid should be given within the first 24 to 48 hours following a burn purely for the replacement of fluid loss. Following this time there is hemoglobin concentration and blood protein loss. This may be controlled by serum transfusion together with a maintenance of blood salts by the substitution of chlorides.

This is an excellent article and shows some advance in experimental work on burns with the detailed and exhaustive blood chemistry studies. It should be of value and worthy of consideration in the management of extensive burns.

(Note: I have in the past few months entered several articles in this division dealing with the subject of burns but since this is a season when more burns are seen and since it is one of the more important phases of both traumatic and reparative surgery I feel justified in entering two more articles dealing with early and late treatment.)

"Surface Defects Of The Hand." James Barrett Brown, M.D. F.A.C.S., St. Louis, Mo., American Journal of Surgery, December, 1939.

The author states that surface deformities of the hand may usually be successfully repaired with free skin grafts which many times give a more satisfactory result than pedicle flaps. This is not true of course in nerve and tendon loss.

Fresh burns of the hands which are superficial can best be managed by using wet packs or grease gauze. This, the author thinks is more satisfactory than sealing the area with tannic acid. The open method allows determination of the amount of loss and freer movement. If the entire depth of the skin is not destroyed, early healing and return of function may usually be expected without necessity of grafting.

Fresh deep burns of the hand, that is, where full thicknesses of the skin have been lost even over small areas in such a kinetic region as the hand, indication for treatment is to restore this loss as completely and as soon as possible. First treatment should be directed toward cleansing and debriding the area, then a daily saline soak for 30 minutes and a grease dressing will add to the comfort of the patient. Active movement should be encouraged in the soak. The average burn should be ready for grafting in about three weeks. If it has been extremely destructive it is sometimes advisable to "dress" the area with a split graft, allowing this to heal and "clean" the area in preparation for later reparative work.

Late deformities of the hand may be repaired by free split graft if these are cut thick and if tendons are not exposed in preparation for the graft. An ulcerated area such as an x-ray burn is possibly best treated by excising the ulceration and allowing a fresh granulation bed to develop prior to grafting.

Detailed methods of application of grafts are given by the author with adequate illustrations. Occupational therapy and physiotherapy treatments are indicated in any hand which has suffered injury and loss. Many of the finer movements for which the lumbrical and interosseous muscles are responsible may be greatly stimulated especially by occupational therapy. Secondary operations for improvements of joint function may some times help but these are rarely indicated.

Comment: This is an excellent example of an article in resume of treatment of defects of the hand. The article is general in its nature and gives many of the principles for both the fresh and late injuries which destroy tissues of the hand. Principles laid down here are early repair and early return to functions.

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D., F. A. C. S.
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"A New Operation for Metatarsalgia and Splay-Foot," Arthur Krida, New York City, Surg. Gyn. & Obst. Vol. 69, No. 1, July, 1939.

This operation is indicated in those feet which are the "splay-foot" type, which is a result of marked relaxation of all the structures which hold the metatarsal region together. It is most commonly found in women in third and fourth decades of life. Apparently this is due to high heels and weak feet from childhood. Symptoms of metatarsalgia then make their appearance, of which the Morton's toe and the feeling of "walking on bones" are classical examples.

Recommended treatment has been support of the metatarsal arch; wider shoes with lower heels; development of the intrinsic foot musculature by exercises; and some type of operation for the hallux valgus, which often accompanies the condition. It is practically impossible to get most women to go through this procedure, consequently is not a procedure which meets the approval of most people.

The author describes an operation which consists of encircling fascial band around the heads of the metatarsals, which when completed holds them together and to a certain extent relieves the bunion. Technique of the operation is not to be considered in detail, although in the article the author describes it excellently. It is simple with the proper instruments and while the abstracter has not done this it is considered to be a very excellent article to be added to the literature for orthopedic surgeons.

"Solitary Myeloma of Bone. A Clinical and Pathologic Entity." Joseph G. Pasternack and Richey L. Waugh. Annals of Surgery, CX, 427, Sept. 1939.

Histological examination of the tumor by a competent pathologist and careful roentgenographic examination of the skeleton or complete and thorough necropsy are nec-

essary to substantiate a diagnosis of solitary medullary myeloma. On the basis of these criteria, the authors have analyzed thirty cases of solitary myeloma, with or without subsequent generalization of the disease, collected from the literature, and have presented a very complete report of an additional case which they have observed for seventy and one-half years. Data on these cases are shown in tabular form and include age, sex, primary site, roentgenographic appearance, Bence-Jones protein, duration, observation period, pain, swelling, pathological fracture, treatment, and progress.

The youngest patient was nineteen months old, and the oldest was sixty-eight years old. Excluding the infant, the average age was forty-nine years. Twenty of the patients were male and eleven were female. Pathological fractures occurred in 42 per cent of the cases. The following bones were involved: femur, nine cases; ilium, seven cases; humerus, five cases; vertebra, four cases; maxilla, two cases; parietal bone, two cases; tibia, one case; and clavicle, one case. In 66 per cent of the cases of solitary myeloma the roentgenographic appearance was that of giant cell tumor or bone cyst. In most of the remaining cases the appearance suggested metastatic carcinoma. Treatment of the cases varied; roentgenotherapy, curettement, excision, and amputation were used.

In true solitary myeloma the prognosis is good. Five patients have been observed for from four to nine years and have remained cured or the disease has been arrested, and no secondary foci have developed.

The following list includes some reprints of good orthopedic articles that have come to my desk recently:

"The Use of Vitallium as a Material for Internal Fixation of Fractures," Willis C. Campbell and J. S. Speed, Annals of Surgery, July, 1939.

"Stabilization of the Hip Joint," Willis C. Campbell, Amer. Jr. of Surg. April, 1939.

"The Autogenous Bone Graft," Willis C. Campbell, Jr. Bone & Joint Surgery, July, 1939.

"Ununited Fractures of Neck of Femur," Willis C. Campbell, Surg. Gyn. & Obst. Nov., 1939.

"Amputation of the Foot, with Calcaneotibial Arthrodesis," H. B. Boyd, Jr. Bone & Joint Surg. Oct., 1939.

"Pseudomycotic Leg Ulcers," J. F. Hamilton, Jr. Okla. State Med. Ass'n. October, 1939.

"Rating of Disabilities," Myron O. Henry. March, 1939. Minnesota Medicine.

"The Orthopaedic Care of the Arthritic Patient," Herman F. Johnson & Gordon Whiston, Nebr. State Med. Jr. Aug., 1939.

"Recurrent Dislocation of the Patella," Frank R. Ober, Amer. Jr. of Surg. Feb., 1939.

"Management of Arthritic Joints from a General Point of View," Jan., 1939, Kansas City Med. Jr.

"Discoid Cartilage, Trigger Knee," Frank R. Ober, Surgery, July, 1939.

"Posterior Bone Block in Talipes Equinus," W. B. Carrell and H. M. Childress, Southern Med. Jr., May, 1939.

"The Role of Posture in Chronic Arthritis," Henry H. Jordan, New York St. Jr. of Med., Oct. 1, 1939.

CARDIOLOGY

Edited by F. Redding Hood, M. D.
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"Fainting Attacks—The Mechanism and Treatment of Certain Clinical Types." E. G. Ferris, M.D. Ohio State M.J. 35: 933-337 (Sept.) 1939. Reprinted in Modern Medicine, January, 1940.

(Although this article was published in the Ohio Journal, the abstract was published in Modern Medicine, I feel it is well worth repeating here. F.R.H.)

A soldier on parade faints in the sun; his sweetheart, receiving a telegram that he has been killed, swoons on the floor. The soldier is a victim of hydrostatic syncope, in which excessive hydrostatic pressure, resulting from the upright position, has pooled blood in the veins and prevented it from reaching the brain. In the girl's case, the fainting attack is of psychogenic origin. These are but two of the many types of fainting attacks classified by Eugene B. Ferris, Jr., M.D., assistant professor of Medicine at the University of Cincinnati (Ohio) College of Medicine, according to the circulatory changes responsible for unconsciousness.

The varied etiology of fainting attacks and the numerous mechanisms by which they are produced require that the treatment change with the cause. In any case, correction of the precipitating and predisposing factors is necessary. However, fainting due to a hypersensitive carotid sinus may sometimes be relieved by surgical denervation of the sensitive sinus (Ferris reports eight cases in which this was successfully done) or possibly by the administration of ammonium chloride, while shock due to actual loss of fluid from the vascular system must be treated by replacing the fluid and correcting the cause. Though fainting is usually caused by acute cerebral anoxemia, recent evidence suggests that this is not always the case. In the so-called cerebral type of carotid sinus syncope and in cases of psychologenic origin, the fainting occurs without any change in the blood pressure or heart rate and apparently without any change in the total flow of the blood to the brain. Symptomatic treatment is required.

The carotid sinus, located at the bifurcation of each common carotid artery, has among other functions that of maintaining a constant cerebral blood flow by reflex regulation of the peripheral circulation. The carotid sinus may become hypersensitive as a result of local pathological or functional changes or mechanical pressure from without. Spontaneous fainting attacks may be reproduced at will by pressure over a sensitive carotid sinus. Mechanical stimulation can be effected by pressing the carotid artery, at its bifurcation, against the spine and massaging it with the fingers for five to fifteen seconds, whereupon the sensitive patient will faint. There are three types of carotid sinus syncope (1) vagal, (2) depressor (3) cerebral.

Orthostatic syncope can also be experimentally produced. If a patient is given a small amount (1½ grains) of sodium nitrite, strapped to a tilting table and tilted to the upright position, fainting will occur. Sodium nitrite seems to decrease the venous tone so that when the patient is tilted into the upright position, the veins in the lower part of the body stretch and hold more than their normal amount of blood. Consequently, less blood returns to the heart and the arterial pressure falls. There is no specific drug that will prevent this reaction, but abdominal and leg binders sometimes helps to abolish symptoms.

Orthostatic syncope identical to that induced by sodium nitrite and tilting is common among debilitated and elderly patients who stand up too soon after severe ill-

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ness, in people who sit or stand too long in one position, and in victims of heat exhaustion.

Fainting differs from the common forms of medical and surgical shock chiefly in the rapidity of onset and recovery and in the fact that there is no change in the total blood volume, simply an excess shifting of the blood to certain areas.

Fainting attacks classified according to the sudden circulatory changes.

Classification	*Treatment*
1. Primary Cardiac Failure	
a. Reflex slowing or asystole, including the vagal type of carotid sinus syncope, vagovagal reflexes from the eyeball, esophagus, bronchi, pleura, etc., and certain types of vasovagal syncope.	Atropine, adrenergic drugs; epinephrine, ephedrine and benzedrine.
b. Asystol or slowing due to myocardial disease, including Stokes-Adams disease.	Adrenergic drugs.
c. Diminished cardiac output without slowor asystole, including ventricular arrhythmias, myocardial infarction, pericardial tamponade and sudden failure.	Treat the specific cause.
2. Primary Peripheral Circulatory Failure	
a. Arteriolar vasodilation, including the depressor type of carotid sinus syncope, postural hypotension and certain examples of psychogenic origin.	Adrenergic drug.
b. Venous pooling of blood, including orthostatic syncope, sodium nitrite syncope and heat prostration.	Trendelenburg position; counterirritation; non-specific preventive measures.

INTERNAL MEDICINE

Edited by Hugh Jeter, M. D., F. A. C. P., A. S. C. P.
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"Sulfamethylthiazol. A Report of Its Clinical Use in Staphylococcus Septicemia with Apparent Success. Report of Animal Experiments." Grayson Carroll, M.D., Louis Kappel, M.D., Lloyd Jones, Ph. D., Fred W. Gallagher, Ph. D., and Francis W. DiRocco, B.S., St. Louis, Missouri, Southern Medical Journal, Vol. 33, No. 1, January, 1940.

This is the most interesting and may prove to be one of the most valuable reports ever made. The authors have investigated the drug very carefully and extensively in connection with the protection of mice against Staphylococcus and also test tube experiments; have given their results and in addition have herein reported five clinical cases of Staphylococcus septicemia, all of which have apparently recovered.

A survival for fifteen days of five out of five animals which were injected with killing doses of Staphylococcus aureus is reported and, as controls, death in all of six nonmedicated animals with the same size dose of the same organism.

The clinical cases treated for Staphylococcus infections were as follows: (1) Kidney and perirenal infection; (2 and 3) pyelonephritis; (4) a breast abscess and (5) Staphylococcus septicemia from an infected umbilicus in an infant.

He concludes his report with a discussion as follows: "When we see all of a group of mice which were giveu the organism die, and another group of mice given the same number of organisms all live when given the drug, and five successive patients, three of whom were dying with septicemia, recover promptly when administered the drug, it is rather difficult to subdue one's enthusiasm. We shall further investigate the drug and note the experience of others with keen interest."

Comment: A physician in a neighboring city called my office recently stating that he had a case of Staphylococcus septicemia immediately following the delivery of a dead fetus and asked for advice as to treatment. I called his attention to the report of Dr. Carroll, which I had heard recently at Memphis, and suggested he wire the Winthrop Chemical Company at New Orleans for some of this drug to be given a clinical trial. (The drug is not as yet on the market for general use.) He obtained prompt cooperation with the Winthrop Chemical Company, received 50 grams of the drug, instituted treatment immediately and at the present writing, approximately three weeks later, he advises me that his patient has made a prompt and so far as can be observed by clinical findings and blood cultures, complete recovery.

This, to me, is by far the most interesting report in medical literature this month and is one which will doubtless be of interest to all internists and most other practitioners of medicine, because Staphylococcus infection ranks among the most common.

UROLOGY

Edited by D. W. Branham, M. D.
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"Hypertension's Challenge To Urology." Stanford W. Mulholland, Journal of Urology, December, 1939.

In this issue of the Journal of Urology are published several articles on the relation of hypertension to urologic diseases of the kidneys and particularly pyelonephritis. Dr. Mulholland's article heads the list of those who discuss this subject. Because of the growing attention paid this condition, it probably would be of interest to read his summary of the present status of this subject.

"There is a definite entity involving the renal circulation at the renal artery or inflammatory within the

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kidney itself that produces an elevation of the blood vessel tone. This pathological process can be determined and if diagnosed, removed with cure of the hypertension as proven in experimental work and clinical cases. Hypertension should be considered in the same light as a fever, it is a symptom rather than a disease. Every patient with high blood pressure should be given treatment especially planned for him; that means that this treatment may be inadequate and ill advised unless one knows the status of the kidney. I believe, urologists can cure an increasing number of cases of hypertension. Periodic physical examinations allows the internist to see many cases before symptoms develop.

"The layman is quite aware of the magnitude of the statement, "you have high blood pressure." Only recently I saw an article, discussing the question of violation of the medical practice act. The persons on trial had been operating a booth at a summer resort, where one could have the blood pressure taken for a fee of 10 cents. The controversy arose whether this was not illegal practice. We all agree, that a systolic blood pressure reading is only a fact, not a diagnosis. This fact, however, is undeniably associated by most persons with health. A reading of "high" blood pressure, would leave no average person undisturbed. The layman is willing to cooperate to chase down its cause. This is well exemplified, first in the advertisements that appear in the medical journals and swell the doctor's mail. A new drug, having remarkable powers of controlling hypertension is brought forth 2 or 3 times each year. The layman pays for these drugs and advertisements. Second, evidence comes in the frequent new operations for interruption of the nerves that influence blood vessel tone. These are mutilating operations of questionable enduring value. The patient grasps at either of these means in hope and desire for relief. The experimental work and clinical cases may explain the failure of many of the operations done on the nervous system for relief of hypertension. Perhaps following lumbar sympathectomy there is a relief of the vascular spasm in the renal vessels, and a temporary improvement in renal circulation. However, due to the vascular changes already present there is a return to the condition present before operation, so too does the blood pressure.

"Certainly before any case with hypertension should be subjected to any of the operative procedures now in vogue for relief of hypertension, the kidney should be ruled out as the possible cause of hypertension. Surely with all this evidence that the kidney may be the primary factor initiating the hypertension it demands the careful attention of every urologist. It is a real challenge to him to pick out the cases of pyelonephritis in the stage where pallor, underweight and slight albuminuria are the only signs. It is only by searching inquiry with the above facts in mind that we will be adding more and more cases to the literature and more cases doomed to a hypertensive end to our list of satisfactory results."

The discussion that followed these articles was very enlightening. Certainly the majority agreed that there is sufficient clinical evidence in instances of so-called essential hypertension to merit a more thorough investigation of the urinary tract than has been done in the past. Dr. Hugh Young aptly summed up the problem in the following:—

"Certainly the amazing mass of material that has been brought out today shows very conclusively that the kidney has a pressor substance in it which plays an extremely important part in hypertension, and that in all probability, instead of operating in many cases on the adrenals and splanchnic nerves, a much more careful study of the kidneys is indicated. It is quite possible that by renal operations a good number of cases of hypertension may be relieved. Another very interesting and important field is thus opened to the urologist."

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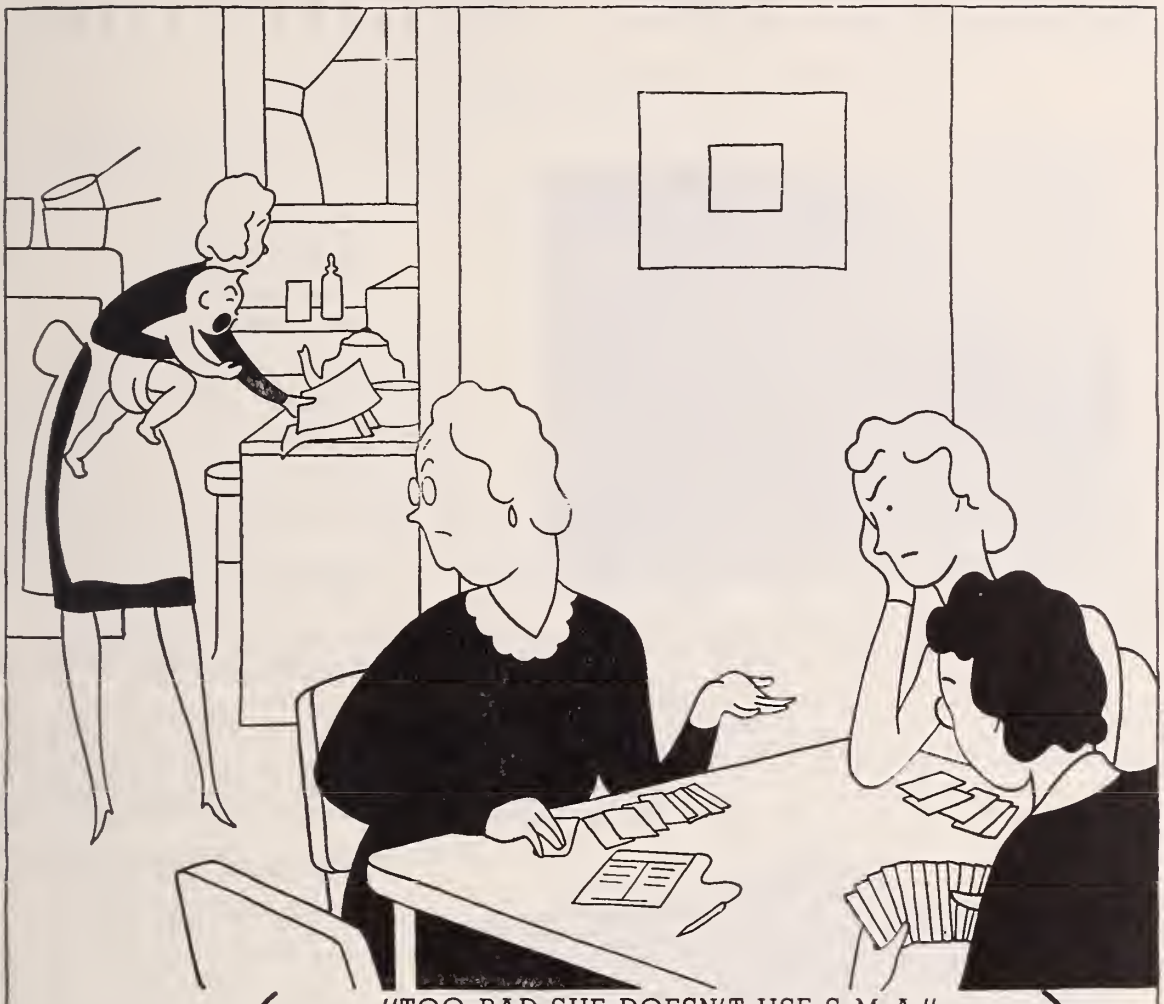
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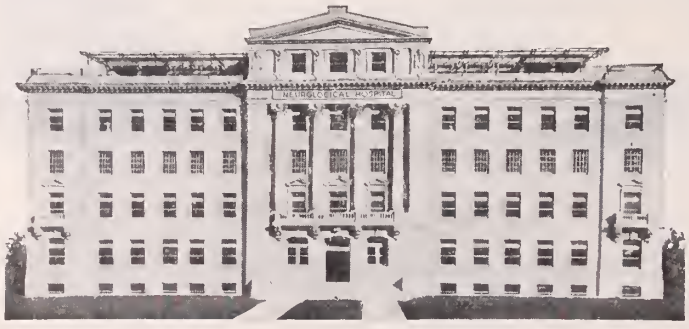
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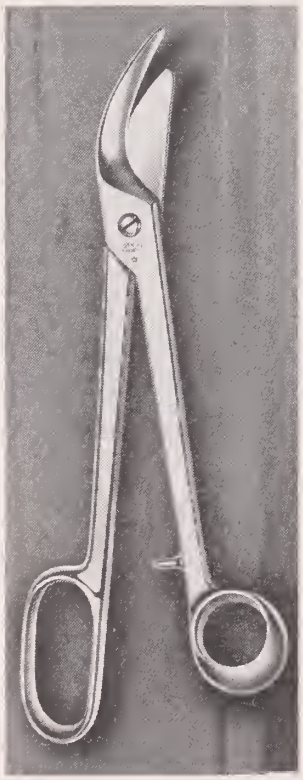
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Heterophoria*

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Imbalance of the extra ocular muscles produces many and varied reflex symptoms; the most common are headaches of all types, car sickness, pain in the eyes, pain in the back of neck, blepharitis, gastric symptoms, and dysmenorrhea, facial tics and instability of the central nervous system.

Some individuals are born with a muscle deformity. Most of the cases coming under my observation can be attributed to: (1) Error of refraction. (2) Interference with nerve impulse, due to endocrine imbalance. (3) Focal infections.

Deficiencies of the refractive index are in my opinion, the source of most of the heterophorias seen; hence it is not necessary to emphatically state that all cases must be corrected with glasses, if the symptoms of heterophoria are to be relieved.

A small group of progressive cases can be attributed to an imbalance of the endocrine system; most are in myopic eyes, and if cared for by refraction, general systemic care and orthroptic exercises, will ultimately be cured, or at least symptom free, when the endocrine system has established a balance.

Foci of infection inhibit nerve impulse to one or more extra ocular muscles and may produce any of the tropias. When the focus of infection is removed, all of those cases that have not been of too long standing are cured; the older cases will respond to orthroptic training.

Heterophorias are classified as Esophoria, Exophoria, Hyperphoria and Cyclophoria.

Esophoria produces very few symptoms, although there are cases of between five and ten prism diopters that are greatly benefitted by one and one-half degree prism, base out in each lense.

Exophoria is the most common and is the producer of the most varied reflex symptoms. All exophorias, in my opinion should be corrected. Small degrees that can be made orthophoric at fourteen inches by a three degree prism, base in each lense. More than three degrees of prism is deforming, both cometically and functionally. Any case of over four prism degrees of exophoria which is having marked symptoms, should have the refusal of a recession of the external rectus muscle on the non dominant eye. No group of cases has shown as much gratitude as those cases of operated exophorias.

Hyperphorias are next in producing symptoms, when the defect is not more than four prism diopters, most symptoms can be relieved by a two degree prism, base up in one and two degree prism, base down in the other eye. The vertical imbalance should be over-corrected; otherwise, as soon as the eyes relax, the over-worked muscle relaxes and the symptoms reappear, making it necessary to increase the amount of prism. Large vertical imbalances of more than four prism degrees, should have either a partial tenotomy or a recession. Operations for heterophoria have not always fully corrected the defect, but all cases have been improved so that prisms can be utilized to correct the deformity.

Cyclophoria responds to orthroptic training as soon as the refractive error and the

*Read before the Section on Eye, Ear, Nose and Throat, Annual Meeting Oklahoma State Medical Association, May 3, 1939, Oklahoma City.

vertical and lateral imbalance has been corrected.

From forty to fifty per cent of cases of heterophoria have both vertical and lateral defects; these should have prisms that make the eyes orthphoric. For example, an individual with a hyperphoria of two degrees, and exophoria of two degrees, should have a two degree prism, base 225 in the right lense; in the left lense a two degree prism, base 45. These cases frequently show improvement either of the vertical or lateral imbalance at the next examination.

When the eyes have been made orthophoric and emmetropic, they should be tested for amplitude of fusion and suspenopsia.

A patient with a low degree of fusion is never happy, even though the eyes are perfectly corrected with glasses.

Wells' work on stereopsis and coordination of the eyes was the first hope of my patients to receive any aid from their distressing chain of symptoms. I have used most all of the instruments that have been offered for sale since that time, and have found that, in my hands, none of them have been perfect, but all of them have had some value, if used, only to develop amplitude of fusion; this frequently taxes the ingenuity of the Ophthalmologist to the breaking point. No matter what instrument is to be used, the operator must dominate the mind of the patient, and force him to make the eyes work, if he is to accomplish the desired results.

Orthroptic training of the eyes gives the Ophthalmologist a very effective weapon against a very large percentage of nervous and maladjusted individuals, making it possible to effect cures in cases that have never had anything but placebos, analgesics and sanatoriums.

This type of patient must be approached from a psychological angle, and requires handling from the beginning to the end. The advanced cases are neurotic and have very fixed ideas, one of which is that they have tried eye exercises and found them inadequate; they are now resigned to some regime as their lot in life. However, they are continuing to seek relief for some fancied or reflex disease.

The dermatologist, gastroenterologist and the neurologist have done much to make it possible for the eye doctor to see these patients; this makes it imperative that we strive to maintain the prestige of regular medicine by handling this type of case to a satisfactory conclusion.

All patients with marked symptoms, either reflex or in the eyes, should be potential cases for orthroptic training. Some of the low grade deficiencies will be symptom free after wearing glasses for a few weeks. If not relieved in three weeks, they should be given stereoscopic training. These low deficiencies can be handled with the Keystone base in or out stereoscopic cards at home, however, it is necessary for the Ophthalmologist to keep this patient under observation; if he does not, he will find that very few will work enough to accomplish anything. I find it much more satisfactory to have them come to the office for treatment. It takes a very few exercises, and you are sure to accomplish what you started out to do.

Those patients with greater deficiencies of stereopsis, accompanied by suspenopsia, should all be given orthroptic training to the point of establishing normal coordination of the eyes. In other words, they should be kept under observation until they fuse objects over a range of forty-five prism degrees and their stereoscopic sense is only slightly deficient.

The treatment of this class of patient is extremely difficult and requires perseverance and careful attention by the Ophthalmologist. An assistant to do the routine work is valuable, but the psychology of being seen by the doctor is, in my opinion, necessary if you are to handle all cases.

Of necessity the cost of this procedure plays a very important part. Anyone starting orthroptic training should be prepared to treat the patient until a successful result has been obtained. Most patients are limited as to finance; this makes it necessary for the doctor to have a definite understanding about the fee, and he must be willing to continue the training after all remuneration has stopped. It is my practice to make a lump sum fee. I find that the patient works much better if he is not thinking of the money that he is spending for the current exercise.

Orthroptic training is of value of heterophoria only by relieving symptoms. Results obtained have remained constant for twelve years. Stereopsis, when well devolepd, seems to be only effected by changes in refraction or toxemia.

CONCLUSIONS:

(1) Heterophoria is one of the most important ophthalmic conditions to be handled.

(2) A complete eye examination and study of the patient is necessary if eye symptoms are to be relieved.

(3) Orthroptic exercises makes it possible to handle all symptoms resulting from heterophoria.

(4) Orthroptic training does not change any of the phorias; it only develops the normal eye impulse and stereopsis.

(6) The stereoscopic sense, when developed in heterophoria, seems to remain constant.

Peripheral Vascular Diseases: Diagnosis and Treatment*

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Progress in the diagnosis and treatment of peripheral vascular diseases has advanced remarkably during the past fifteen years. Credit for most of this progress can be charged to a better and more rational understanding of the pathological physiology involved in the production of these diseases. Knowledge, however, concerning the etiology of the organic and functional peripheral vascular disturbances, is still a debatable question.

The dissemination of information that will aid in the early recognition and best methods of treating patients who suffer for the want of a better circulation to their extremities, should be the aim of each of us. This thought deserves emphasis when one believes that many victims of impaired circulation, especially of the feet, are not recognized or are incorrectly diagnosed. It is often most unfortunate for the patient who has an ingrown toe-nail with a mild infection superimposed upon a deficient arterial circulation to come under the care of a surgeon who lets his surgical ambition supersede his best diagnostic judgment. The surgical pathologist acts as a good check-rein on the would-be less cautious surgeon in removing a non-inflamed appendix, but as yet, there is no such barrier thrown in the way of one who may be too quick to incise an infected toe or remove an ingrown toe-nail before he has first ascertained the competancy of the peripheral vascular circulation. The application of surgical treatment, poorly timed, to a part devoid of proper blood supply, may be the "straw that will break the camel's back," so to speak, and, perhaps, result in the loss of a limb or even of a life.

In order to facilitate a clearer understanding of some of the diseases that may affect the peripheral blood bessels, the following classification will be followed in this discussion:

1. Endarteritis Obliterans (degenerative disease).
2. Thrombo-angiitis Obliterans (inflammatory disease).
3. Vasopasm (dynamic—functional or induced).

*Dr. Willis C. Campbell Clinic.

With the proper understanding of the underlying pathological physiology responsible for the symptoms and signs in the peripheral vascular diseases, diagnosis offers little difficulty to the experienced physician except in the exceptional border-line case.

ENDARTERITIS OBLITERANS

In the case of endarteritis obliterans, which is an organic degenerative disease, the age of the patient stands next in diagnostic importance to an accurately taken history and carefully made physical examination. It is the rare exception to find this disease in one under 45 years of age, while it composes the largest group of all the peripheral vascular diseases we see.

The outstanding early symptom is intermittent claudication. This is due to the physiological imbalance in the peripheral circulation, as a result of the inability of the collateral circulation to compensate for the arteriosclerotic changes that have taken place in the peripheral vessels, resulting in a gradual occlusion of the lumen. The number of city blocks the patient can walk without cramp-like pain in the legs, or becoming leg weary, is a rough estimate of the physiological imbalance of his circulation.

A number of patients suffering from impaired circulation come to the physician with one or more of the following: complaints: "flat feet," "fallen arches," "sprained ankle," or "rheumatism." Such complaints are rare in the degenerative disease group but quite common in thrombo-angiitis obliterans which is most prevalent in the young adult and middle aged individuals. Admission to the Clinic of patients with such complaints are not uncommon. Many of these patients have been from physician to physician seeking relief without finding it. This can be said to be due, in the main, to the physician failing to look for evidence of peripheral vascular disease other than the presenting subjective symptom.

Rest pain is not experienced until late in the disease, or after gangrene has developed. On the contrary, resting the painful limb, following exercise earlier in the course of the disease, gives prompt relief.

The presence of tingling, burning of the

soles of the feet, or numbness, are common symptoms that may be misleading to the unsuspecting physician and lead him to seek a cause for them in the central nervous system, such as posterior column sclerosis.

Changes in temperature alter the comfort of these patients less often than in the other forms of peripheral vascular diseases. It is not an uncommon thing for the diabetic patient with endarteritis obliterans to state that even in cold weather he may uncover his feet at night to obtain relief of a burning sensation of the soles and toes of his feet. On the contrary, cold stimuli definitely aggravate the symptoms in thrombo-angiitis obliterans and will actually precipitate an attack of vasospasm, in Raynaud's disease.

Skin temperature studies, as a diagnostic means are not necessary and, therefore, are not justified in the vast majority of these patients, due to the loss of vasoconstrictor function incident to the pathological changes in the wall of the arteries. There is, however, the occasional patient, little past-middle-age, with signs and symptoms which simulate both the degenerative and inflammatory occlusal forms of peripheral vascular disease in whom skin temperature studies by one of the many methods recorded in the literature may be used to advantage in making a diagnosis.

X-ray of the soft tissues of the leg may facilitate in making a diagnosis by revealing a calcification in the arteries. It is amazing to see in some patients marked calcification associated with so few and so mild subjective symptoms. This confirms the known fact that the degenerative disease is frequently a patchy affair, involving certain arteries to an extensive degree, while others may escape with little change.

The incidence of endarteritis obliterans, when not associated with diabetes mellitus, is much higher in the male.

The physical findings in a given patient will depend very largely upon the age of the patient and duration and degree of the underlying pathology. Quite a few of these patients, upon admission to the Clinic, already have developed gangrene. As a rule, long before gangrene develops there is evidence of atrophy of the soft tissues, shiny thin dry skin, cold feet, striated brittle toenails, absolute plantar ischemia, when elevated and remaining pale when pendent, provided arteriolarsclerosis is marked — But if the arterioles are not extensively occluded and some patency remains in the lumen of the major and secondary vessels, there may be redness of the foot when pendent and less plantar ischemia, when elevated.

One must not be deceived by the presence of palpable pulses over the dorsalis pedis and posterior tibial arteries, for in such a foot, gangrene may be present or impending due to marked arteriolar obstruction. The oscillometer, which we use in all cases, may record a pulse where one could not be palpated. This instrument renders valuable information as to the patency of the arteries of the extremities. Turner has developed an instrument called the plethysmosphygmograph for studying volume changes in the blood vessels of the small parts such as the distal phalanx of a finger or a toe which is of more scientific interest at this time than of practical clinical value. Samuels has emphasized plantar ischemia as a sign of great importance. Its presence usually signifies arteriolar occlusion. If it is associated with low or absent pulse, as determined by the oscillometer, one may be assured of the presence of serious vascular impairment.

THROMBO-ANGIITIS OBLITERANS (Buerger's Disease)

Thrombo-angiitis obliterans is considered to be of an inflammatory nature, this being predicated for the most part upon the histopathology associated with it. It is often referred to as Buerger's Disease as it was he who classified it as a definite entity a number of years ago.

Its etiology is not definitely known. Goodman and others are proponants of the opinion that typhus bears a definite etiologic relation to thrombo-angiitis obliterans. This view has not been generally accepted. During the past eight months, four patients have been tested with Goodman's typhus antigen. Of the four tested, three were negative and one was positive. All gave a negative typhus history.

Tobacco holds a very definite place, at least as an exciting factor, in the causation of this disease. However, thrombo-angiitis in one who never has used tobacco is seen very rarely.

Racial incidence of thrombo-angiitis obliterans is no longer held to be particularly significant as it has been found in so many different nationalities. We have seen it in only one Jew in our series of cases.

Although the symptoms and signs in this disease are quite similar in many respects to those associated with the foregoing disease, there are some features which are quite distinctive in thrombo-angiitis obliterans which separate it from degenerative vascular disease and which will aid materially in making a diagnosis.

This disease makes its appearance, as a rule, between the second and fifth decades of life. It is exceedingly rare in the female. Phlebitis of a migratory type, may be the initial clinical symptom and antedate all other symptoms by weeks or months. Phlebitis is present in from 25 per cent to 40 per

cent of the patients. Ulceration in connection with the phlebitis is prone to occur. Especially is this true the nearer the process is to the origin of the vein.

The pain, as a rule, is more agonizing and nerve racking, and the patient looks more haggard than is the case in the patient with the degenerative arterial type of disease. Walking a few city blocks may precipitate muscle cramps in the legs.

Another quite prominent feature in the inflammatory type is the rest pain and pain at night. Many of these patients state they have to sit up and rub their feet most of the night. The persistent pain and loss of sleep precipitate suicidal tendencies in some patients.

Cold stimuli definitely aggravate the symptoms. The vasoconstrictor component, which is quite prominent in the earlier stage of thrombo-angiitis obliterans as contrasted with endarteritis obliterans, in which it is practically nil, may be the responsive factor to the cold stimuli.

Due to the marked associated vasospasm, skin temperature studies made before and after interrupting the vasoconstrictor impulses to the involved parts may aid materially in diagnosing the border-line patient. Furthermore, skin temperature response after paralyzing the vasoconstrictor nerves will materially aid one in prognosticating the good that may be derived from a permanent interruption of these nerves by surgery or alcohol injection. When there is any doubt as to the diagnosis between thrombo-angiitis obliterans and arteriosclerotic endarteritis, skin temperature studies should be made. There will always be a greater rise of skin temperature in the former than in the latter following interruptions or release of the vasoconstrictor nerve impulses.

Although bilateral involvement of both limbs is the rule, the unilateral appearance of pain, color changes and subnormal skin temperature is a very common observation. This subjective status may be maintained for a long period of time with little or no complaint referable to the opposite limb. The appearance of one or two toes retaining a death-like pallor while the remaining ones turn pink soon after changing the foot from an elevated to a dependent position, in a person under 45 years of age, is highly suggestive of thrombo-angiitis obliterans. Furthermore, one may see just one toe become gangrenous, leaving the adjacent toes free of gangrene. While on the other hand, another patient may be relatively free of objective evidence of arterial disease, but present definite subjective symptoms.

VASOSPASM

Functional vasospastic phenomena are met with in both sexes, but it is decidedly more common in the female. The evidence of functional vasospasm in the vast majority of individuals is almost wholly objective. The cause of the disturbed functional state is not known. Lewis places major emphasis on a local factor being responsible for the digital arterial vasospasm and minor emphasis on the central origin of the vasospasm. It is found associated with trauma, endocrine disturbances and arthritis in addition to being held responsible for the production of Raynaud's disease. Vasospasm is also a prominent feature in scleroderma.

While most of the patients exhibiting functional vasospastic phenomena have no subjective symptoms or organic structural change in the tissue, it is necessary that the patient with Raynaud's disease be considered for the obvious reason that the disease will

AN ANALYSIS OF 130 PATIENTS WITH PERIPHERAL VASCULAR DISEASE

DISEASE	TOTAL NUMBER	NOT TREATED	RESULTS Rx Minus PAVAEX		RESULTS Rx Plus PAVAEX	
VASOSPASM RAYNAUD'S (GYNERGEN)	15	3	Improved Unknown	3 1	Excellent Much improved Not improved	3 3 2
BUERGER'S	19	6	Much improved Amputation	1 3	Excellent Much improved Improved	5 2 2
ARTERIO-SCLEROSIS (DIABETIC)	26	9	Improved Not improved Amputation	1 1 4	Excellent Much improved Improved Not improved Amputation	2 6 1 1 1
ARTERIO-SCLEROSIS (SENILE)	63	28	Much improved Improved Not improved Amputation Death	1 2 1 7 1	Excellent Much improved Improved Not improved Amputation Unknown	3 2 13 2 2 1
EMBOLISM & THROMBOSIS	7	0	Amputation	1	Excellent Much improved Amputation Death	1 2 2 1
TOTAL	130	46		27		57

progressively grow worse in some, if not treated, to the extent of producing marked organic tissue changes or complete disability.

Raynaud's disease makes its appearance in the second and third decades of life, as a rule. It is prone to involve the distal parts of all extremities, especially the hands and fingers. The cheeks, nose, and ears are attacked by the process in some instances. Its early manifestations are color changes and parasthesias. Pain is common especially late in the disease. A triphasic color reaction has caused it to be divided roughly into the following phases:

1. Phase of syncope or ischemia.
2. Phase of asphyxia or cyanosis, and
3. End phase, that of gangrene.

The color changes are prone to be intermittent, first, greyish-white, then changing to cyanosis. Earlier in the disease, each of the color changes so characteristic of this phenomenon lasts but a few minutes. Later the grey color is replaced by a cadaveric paleness lasting a longer time, associated not only with numbness but pain as well. As the disease progresses structural changes occur with the loss of small bits of soft tissue of the tips of the fingers, atrophy of soft tissue of more or less marked degree, (sclerodactylia), absorption of bone and curling and ridging of the finger nails.

METHODS OF DETERMINING EFFECT OF VASOSPASM ON THE PERIPHERAL BLOOD SUPPLY

I. Calorimetric
 A. Thermocouple
 B. Mercury thermometer
II. Oscillometric
 A. Pachon's method
 B. Recording
III. Plethysmographic
 A. Arterial
 B. Arteriolar
IV. Vascular visualization
 A. Direct: Microscopic examination of capillaries
 B. Indirect: Arteriograms

Cold stimuli precipitate attacks. An attack in one digit to the exclusion of the others may be precipitated by plunging the finger into water at 15 degrees C to 20 degrees C, (59 degrees F to 68 degrees F). The attack may be relieved, after withdrawing the finger from the water, by gradually warming or rubbing it. The bilateral symmetrical distribution of the disease is more or less characteristic, being seen more often in the hands and fingers than in the lower extremities.

Hyperhidrosis is a very prominent feature. The patients will frequently relate that sweating is so free that their clothing becomes saturated and water will actually drip from their skirts.

Another interesting feature of Raynaud's disease is that some patients seem to outlive it, the phenomenon gradually ceasing to assert itself as age increases.

The diagnosis in most cases can be confirmed by comparing skin temperature readings before and after fever is induced, or after the sympathetic nerve impulses are interrupted to the affected part by paravertebral block, spinal anesthesia, or peripheral nerve block. If the test is performed before permanent occlusion of the arterioles takes place in Raynaud's disease, there will be a marked rise in skin temperature, while in thrombo-angiitis obliterans, the rise will be less marked. A 3 degree to 5 degree temperature rise may be obtained in thrombo-angiitis obliterans, whereas in Raynaud's disease, the rise may be as much as 10 degrees.

TREATMENT

We maintain a conservative attitude in the treatment of the organic peripheral vascular diseases. Departure from this course is only made after conservative measures have failed to produce desired results, or in those in whom the disease has obviously advanced beyond any hope of benefit by conservative treatment. Previous to a few years ago, the treatment of endarteritis obliterans was considered practically hopeless. That opinion, no doubt still exists in some quarters even today. The fact is that with present day conceptions, and methods of treating peripheral vascular diseases, many of these patients can be relieved of their symptoms.

PROCEDURES FOR STUDYING VASOSPASM

I. Interruption of sympathetic impulses
 A. Local anesthesia
 1. Peripheral nerves
 2. Spinal cord
 3. Sympathetic ganglia
 B. General anesthesia
 1. Inhalation
 (a) Ether
 (b) Nitrous oxide
 2. Intravenous
 3. Sacral
II. Inhibition of sympathetic tone
 A. Physical (heat)
 1. Indirect: Injection of foreign protein
 2. Direct application
 (a) General: S. P. diathermy; fever cabinet
 (b) Local
 (1) Involved area
 (2) Uninvolved area
 B. Physiologic: Reactive hyperemia
 C. Pharmacologic
 1. Alcohol
 2. Nitrites

Futhermore, amputation of a limb is prevented or deferred indefinitely in many of them. There are others, however, especially those who show by the oscillometer an abscence or greatly diminished pulse or by plantar ischemia, indicative of arteriolar obstruction, in whom no treatment so far tried will give relief. These result in amputation for the relief of ischemic neuritis or gan-

grene. Explicitly written instructions are given each patient in the proper hygenic care of his feet upon leaving the hospital. These instructions render aid in 2 ways; (1) they tend to make the patient conscious of his impaired circulation, and, (2) acts as a safeguard against trauma and infection.

FOCI OF INFECTION

Where there is obvious infection or toxic absorption with other things being equal, these should be eliminated, even in those with degenerative arterial disease.

One should in all arteriosclerotic vascular disease ascertain the sugar tolerance of the patient. If diabetes mellitus is a factor, this must receive primary consideration and immediately put under control.

DRUG THERAPY

Acetyl-beta-Methylocholine, Acetyl-beta-Methylcholine chloride (mecholyl), sodium nitrite and alcohol have been used to produce vasodilatation. The chief objections to their use are; (1) their action is fleeting, and (2) a general vasodilatation is produced accompanied by a fall in blood pressure. The use of mecholyl applied by means of iontophoresis, may be justified in selected cases such as those with contraindications to the use of changes of environmental pressure. In using mecholyl, one must be careful to avoid general vascular reactions. Vasodilator effects are claimed for certain pancreatic and muscle extracts. We have had very little experience with these extracts.

TOBACCO

Experimental data reputed to show the effects of tobacco upon peripheral blood volume and the actual reductions of the number of capillaries in a given area have been recorded in the literature. The vasoconstrictor effect of products of tobacco have been demonstrated in normal individuals, as well as in patients with peripheral vascular disease. We, therefore, forbid the use of tobacco in all patients with peripheral vascular disease.

INTRAVENOUS THERAPY

Hypertonic saline solution, as suggested by Silbert and Samuels, in strengths of 2 per cent to 5 per cent, is given all arteriosclerotic and thrombo-angiitis obliterans patients, provided there exist no demonstrable contraindications. Definite value is attributable to the use of hypertonic saline in these patients. From 150 cc to 300 cc of saline are given every forty-eight to seventy-two hours with gradual lengthening of the interval of treatments. It has not been used except in conjunction with other therapeutic measures and therefore, we are unable to estimate its actual merit. Results from it must of necessity require long continued treatment.

POSTURAL EXERCISES

Reactive hyperemia has long been held to be a stimulus to the production of collateral circulation. Buerger proposed certain exercises which, when used, tend to develop hyperemia. Allen added certain helpful muscular exercises to these and together are now referred to as "Buerger-Allen" exercises. From three to five one hour seances of these exercises are given daily. However, the general condition of the patient, and the degree of pain incident to their use determines when, how long, and how often these are to be carried out.

VENOUS OCCLUSION THERAPY

An intermittent occlusion and release of the return venous flow from an affected limb by means of a pneumatic cuff about the thigh are believed to be helpful especially in the patient with complications such as gangrene, infection, or coronary disease in whom more active measures dare not be used. We have improvised an apparatus that operates automatically in producing intermittent venous occlusion. Our machine occludes the venous return for two minutes and releases it for two minutes. Collens and Wilensky have

AN ANALYSIS OF PERIPHERAL VASCULAR DISEASES AS TO AGE, SEX AND RACE

Age Group	No. Pts.	VASOSPASM RAYNAUD'S (GYNERGEN)				BUERGER'S				ARTERIOSCLEROSIS								EMBOLISM and THROMBOSIS			
										DIABETIC				SENILE							
		MG	FG	MJ	FJ	MG	FG	MJ	FJ	MG	FG	MJ	FJ	MG	FG	MJ	FJ	MG	FG	MJ	FJ
10-19	1	1																			
20-29	8	3	2	1		1												1			
30-39	17	2	1		1	11						1							1		
40-49	20	2	2			5		1		2	1	1		5					1		
50-59	28					1				1	1	1	1	14	3	1	2	2	1		
60-69	35									6	3	4	2	12	2	5				1	
70-79	16										2			12	1		1				
80-89	5													3	2						
TOTAL	130	8	5	1	1	18		1		9	7	7	3	46	8	6	3	3	2	2	

devised a machine called the Col-Wil venous occlusion apparatus for accomplishing the same thing more efficiently.

ARTIFICIAL HEAT

This may be accomplished with relief of symptoms temporarily in selected cases by means of a heat cradle, contrast baths, typhoid vaccine, superpower diathermy and fever cabinet. As stated above, the patients must be selected when using the more drastic measures for raising body temperatures in order to avoid burns and other complications. There is less need for artificial fever produced by foreign proteins or by means of electricity, provided apparatus is available for changing the environmental pressure about the affected limb. Such apparatus as the Pavaex machine has facilitated greatly our treatment of the organic peripheral vascular diseases.

PASSIVE VASCULAR EXERCISE

Many attempts to change the environmental pressure about an affected limb had been tried before the work of Landis and Gibbons and Herrmann published a few years ago. To Herrmann goes most of the credit for popularizing this form of therapy as applied by the use of the "Pavaex machine." Passive vascular exercise has proven its worth in two ways at least, namely; (1) its unquestionable value to the patient, and (2) it has given encouragement to the physician who before six or eight years ago would greet many of his patients with organic vascular disease with despair and a feeling of hopelessness.

Since we began using this form of therapy in July, 1935, and up to January, 1939, 65 patients with peripheral vascular disease had been admitted. Of the 65 patients, 54 (83 per cent) received pavaex in addition to other therapy, while 11 (17 per cent) received no pavaex, but did receive other forms of treatment. A number of these patients were admitted with local gangrene already present, who responded to alternating negative and positive pressure by the healing of the gangrene and by the relief of their symptoms. There were a few with gangrene which responded to treatment by healing but later came to amputation because of the extreme arteriolar occlusion.

Amputation of one or more limbs was performed in 12 of the 65 (18 per cent) patients admitted since July, 1935. Of the 12, there were 7 (58 per cent) who received no pavaex. 3 of the 7 were arteriosclerotic endarteritis with gangrene; 2 had diabetes mellitus with gangrene; 1 had thrombo-angiitis obliterans with extensive infection; and the 7th amputation followed cervical rib with thrombosis. Of the remaining 5 (41 per cent) in whom pavaex was used, 2 had embolisim and thrombosis, (one of these being in an arm 12 days postpartum, and the other in both legs following auricular fibrillation) ; 2 had endarteritis obliterans, (one with gangrene and extensive arteriolar occlusion, and the other intractible pain due to ischemia) ; and the fifth was a diabetic with endarteritis obliterans and gangrene. Excluding the cervical rib case of the non-pavaex treated group of eleven, there were 6 amputations (60 per cent) against 3 (5.7 per cent) after excluding the 2 embolism and thrombosis cases, in the 54 pavaex treated group. All 3 amputations in the latter group were for endarteritis obliterans with gangrene and diabetes mellitus was an additional factor in one of the three.

Confronted with a patient with intractible pain due to the degenerative type of arterial disease who does not respond to conservative therapy, amputation, or crushing of the affected nerve, may be the treatment of choice. Likewise, there may be the occasional case of thrombo-angiitis obliterans who should be treated surgically or by alcohol injection of paravertebral ganglia, to release the vasospasm or abate the pain that accompanies it. But of nine patients with thrombo-angiitis obliterans treated with saline intravenously, Buerger-Allen exercises, contrast baths, elimination of tobacco and other vasoconstrictor stimuli, plus pavaex, no radical measures have been necessary and our results have been gratifying.

To the contrary, Raynaud's disease, especially if progressive, should receive careful consideration by the neurosurgeon looking to either the removal of the inferior cervical and first and second thoracic ganglia, or interrupting the associated white rami communicantes for spasm involving the arterioles of the upper extremities. The same procedure may be applied to the second, third, and fourth lumbar parasympathetic ganglia or white rami for involvement of the blood vessels of the lower extremities.

CONCLUSIONS

1. More accurate diagnoses with better and more rational methods of treatment are afforded the patient with peripheral vascular disease today than ever before.

2. Data concerning methods of early diagnosis and treatment need greater dissemination among the profession.

3. Any patient who presents himself with complaints referable, especially to the feet or legs, unless the cause is obvious, should first have his circulatory status established.

4. A diagnosis can be made by the experienced physician in a majority of the patients from a carefully taken history and an accurately made physical examination. But

in the questionable border-line case oscillometric studies and skin temperature readings may be necessary for diagnostic purposes.

5. Conservative treatment is the method of choice with us, and its results have been gratifying. Even in patients with gangrene, healing has occurred and amputations prevented or at least deferred indefinitely in some.

6. Even if endarteritis obliterans is seen late, with marked plantar ischemia and very little or no pulse amplitude as recorded by the oscillometer, the condition may not be considered hopeless for conservative treatment, but the prognosis is always grave.

7. Of 65 patients examined in the Clinic since passive vascular exercise (Pavaex) therapy was introduced in 1935, amputation of one or both limbs (upper and lower included) has been performed in 12 patients. 3 of these followed acute vascular accidents such as embolism and thrombosis. Of the remaining 9, 6 (66 per cent) received no Pavaex, but only the other forms of therapy, while the other 3 (33 per cent) did receive Pavaex in addition to other therapy.

Acute Infective Laryngotracheobronchitis

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Most of the work in connection with this disease has been done by laryngologists, among them Dr. Chevalier Jackson, who defines acute infective laryngotracheobronchitis as "an acute infective inflammation of the larynx, trachea and bronchi characterized in typical cases by toxemia, edema of the larynx and subglottic region, thick, viscid, obstructive, often crusting non-membranous exudate in the tracheobronchial tree." This in short gives us an accurate picture of the disease which was first described by Blaud in 1923. There have been reports since then of classical cases, but until fairly recently most of them have been wrongly diagnosed as laryngeal diphtheria, or pneumonia.

The disease is relatively common occurring in epidemics and sporadically, the most typical and severe cases occurring under three years of age. It is infectious and contagious. The causative organism is most often thought to be hemolytic streptococcus, though streptococcus viridans, staphylococcus, or pneumococcus may predominate or be present in pure culture. The influenza bacillus is occasionally present.

The infection descends from the pharynx and the causative organism travels by way of the lymphatics in the interstitial tissue to the supraglottic region where the mucous membrane is columnar and beneath which there is a rather loose connective tissue. Stratified squamous epithelium covers the vocal cords which are practically devoid of lymphatics but beneath this there is again columnar epithelium over loose connective tissue which is especially loose in the subglottic region. At the posterior aspect of the larynx, there is communication between the lymphatics above and those below the cords and if the infection can take this path it finds itself in the extremely loose connective tissue of the subglottic region and, by extension, in the tighter submucous connective tissue of the trachea and bronchi.

The first sign of obstruction is usually due to swelling in the subglottic region. As the infection spreads, there is also swelling of the trachea and bronchi but not so marked because the submucous tissue is tighter.

The tracheobronchial glands first produce a serous then later a mucoid secretion which becomes mixed with a fibrinous or fibro-purulent exudate along with degenerated epithelium and polymorphonuclear leukocytes. These go to make up the very tenacious material seen in the trachea and referred to as rope-like and gummy. The secretions and dried crusts cause partial or complete occlusion of the bronchi and bronchioles and produce thereby atelectasis, compensatory or obstructive emphysema, or pneumothorax from rupture of an emphysematous bleb. Fatal complications may be pulmonary edema, pneumonia and septicemia.

Cases are mild or severe differing only in degree. A history in about one-half the cases will show that the condition was preceded by an upper respiratory infection no more severe than usual. Croupy cough, an inspiratory stridor and expiratory wheeze then appear and are followed by symptoms of high obstruction as retraction at the suprasternal notch, the supraclavicular areas and the epi-

gastric region. The child appears toxic, the temperature ranging from 102-105 degrees Fahrenheit, has a poor color being cyanotic or gray, and is quite restless due to air hunger. If tracheotomy is not done, the patient may die of exhaustion with respiratory and cardiac failure. Even though an adequate trachetotomy is done, the thick exudate in the trachea and bronchi must be removed or the child will die of atelectasis or drown in his own secretions.

In diagnosing the disease, diphtheria and foreign body, especially one which is non-opaque, should be considered. With these possibilities in mind, an x-ray of the chest may be made and bronchoscopy carried out which affords a direct view of the larynx and trachea and the opportunity for smear and culture.

The mortality has varied considerably in the reports chiefly because there has not been a criterion for the diagnosis, also because the virulence of the infection varies from year to year and again, because the treatment standardized in the past four or five years has saved the lives of many children.

The child should be placed in a room supersaturated with moisture, the temperature being not over 75 degrees Fahrenheit. If obstructive symptoms are severe enough to warrant it, a low tracheotomy should be done. Following this, the patient is so relieved he drops off to sleep, often before the operation is completed. In former years tracheotomy was withheld by some because it was thought that air entering the trachea in this manner, instead of being warmed and moistened by the upper respiratory passages, would make for greater desiccation of the secretions of the tracheobronchial tree. To combat this, in addition to the moist atmosphere, a thin, damp strip of gauze may be kept over the tracheotomy tube.

Vigilance for the following few days is paramount, for at any time more or less embarrassment may suddenly occur which may be relieved by suction with the catheter but may require bronchoscopic aspiration. The one in charge should be aware that bronchial obstruction does not have the signs of laryngeal obstruction, but is characterized by an increasingly rapid and shallow respiration, accompanied by an increasing pulse rate and cyanosis or ashen pallor. Different solutions in varying amounts have been instilled in the tracheotomy tube to aid in removing the crusts which become so adherent to the mucous membrane. Among these are: (1) solution of normal saline, (2) solution of sodium bicarbonate and (3) ephedrine sulphate in normal saline solution. Weech of New York gives Dr. H. G. Stewart credit for the method of injecting from four to five cubic centimeters of normal saline solution into the trachea quickly during inspiration. The fluid is drawn into the trachea and bronchi, causing a paroxysm of coughing, during which time the fluid along with the dislodged crusts is aspirated by a catheter. T. R. Gittens, and Green and Miller have reported using solutions of epinephrine in strength from 1-10,000 to 1-1000 to cause shrinking of the mucous membrane and release of the viscid plugs. Drugs to liquify the exudate have not proved of any value.

Opium and belladonna are definitely contraindicated, the former because it suppresses the already weak cough reflex, and belladonna because of its drying effect on the secretions. Sulfanilamide is of value when streptococcus is present. After a few days as the toxicity becomes less and the general condition improves, the exudate in the trachea becomes more liquid and suction is needed less often.

Rest is important for recovery, therefore suctions should be done only when indicated and unnecessary examinations and laboratory procedures should be withheld.

Fluids are also of much importance and may be given by bottle, Breck feeder, or dropper without strangling the patient.

Oxygen therapy is of benefit with a failing circulation.

Postural treatment, as suggested by Galloway of Evanston, using gravity to place the secretion in areas of greater cough reflex would appear to be good therapy especially, as he points out, when larger amounts of fluid are instilled into the tracheotomy tube.

Transfusion is an aid when the infection is prolonged, when there is more than the usual anemia, if little food is taken, or if dehydration becomes a disturbing factor. Even though this treatment is efficiently carried out, the disease appears to be self limited with a usual course of about two weeks.

To compare this disease as manifest in this locality to that of other parts of the country, nineteen cases have been collected from five Oklahoma City hospitals.

In four privately owned hospitals, by checking the files back eight to ten years, sixteen cases were found, all correctly diagnosed but many listed under silghtly varied terminology. At the Municipal Contagious Hospital, by examining every chart bearing a diagnosis of diphtheria for the past two and one half years, three additional cases were found. These had been sent to the hospital diagnosed as diphtheria, the patient accepted and treated as such although no diphtheria organisms were found and no

membrane was present in the throat or region of the larynx.

In this series of cases each year from 1932 to 1939 is represented, but in only three different years was there more than one case, being two in 1933, five in 1937, and seven in 1938. The spring and winter seasons accounted for three-fourths of the cases. There were eleven white males and eight white females ranging in age from three months to twelve years, thirteen or approximately 68 per cent (68.4 per cent) being less than two years.

Some distinction has been made regarding the onset of the illness. Those considered to be gradual in onset had been preceded by an upper respiratory infection lasting from two to three days to three weeks before symptoms of the disease were present. Into this group fall ten cases or approximately 52 per cent (52.6 per cent). While into the group classed as sudden in onset, in which hoarseness and difficulty in breathing were manifest within a few hours after the child became ill, there were only five, or approximately 26 per cent (26.3 per cent). The histories of four cases were insufficient for classification.

Regarding symptomatology, these children fit very well the usual picture of acute infective laryngotracheobronchitis exhibiting high temperature and moderate to profound toxemia.

Eight of the nineteen patients were bronchoscoped with findings of moderate to marked supraglottic edema with or without edema in the subglottic region. There was marked edema of the trachea in one case and in two cases a white exudate on the false cords which was easily removed without leaving a bleeding surface.

Cultures from the throat or larynx were reported in ten instances. Two showed streptococcus alone, three staphylococcus alone, four a mixture of streptococcus, staphylococcus and other organisms, and one streptococcus with other organisms. The least severe case had a leukocyte count of 7,600 with 72 per cent polymorphonuclears, the remaining thirteen who had blood work ranged from 8,700 to 26,600 leukocytes, polymorphonuclear leukocytes being from 41 per cent to 93 per cent.

The usual medical treatment was carried out. Sulfanilamide was given to three and diphtheria antitoxin to six. Only two cases, the mildest of the group, did not require tracheotomy. Of the seventeen who were tracheotomized, three were previously intubated but the airway found to be insufficient.

Complications were present in six cases, acute suppurative otitis media in four, bronchopneumonia in two, and acute cervical adenitis in one.

Fifteen patients recovered with an average stay in the hospital of 11.9 days, and four expired making a mortality rate of 21 per cent. Of those who expired, one was a fourteen-month-old infant who had a "measles-like" rash and suppurative otitis media one week before obstructive symptoms, and difficulty in breathing one week before admission to the hospital. Bronchopneumonia was terminal. Another, a sixteen-month-old infant, had respiratory difficulty ten days before admission to the hospital, was bronchoscoped immediately and appeared to be relieved, then suddenly expired about an hour later, emergency tracheotomy being of no avail. The third infant, aged three months, had dyspnea five days before entering the hospital. X-ray revealed a slight enlargement of the thymus and complications were asthma and impetigo. Death occurred on the thirtieth hospital day, and autopsy revealed red and swollen mucous membrane of the larynx and trachea, covered with a thin sticky secretion like varnish. The fourth baby, fourteen months of age, had dyspnea four days before admission to the hospital. On admission, there was marked dyspnea, cyanosis and extreme restlessness. Bronchoscopy revealed the usual picture in acute infective laryngotracheobronchitis and x-ray revealed considerable enlargement of the thymus. Death ended on the ninth hospital day with cyanosis and rapid shallow respiration.

Discussion

As in the usual series of cases reported, it is felt that only the moderate and severe types are represented, the more mild being treated in the home or often unrecognized. The epidemic nature of the disease is borne out in the years 1937 and 1938 in which almost three-fourths of the cases occurred. The mortality rate of 21 per cent compared to that of other series is exceptionally good. Of those who expired, respiratory difficulty was present from four to ten days before hospital admission for its relief. This might suggest one cause of death, however, we do not know the degree of dyspnea which was present, and on the other hand of those who recovered two had respiratory difficulty for one week and others from one to two days before relief. On the whole, the time was very short between hospital admission and relief of dyspnea. This fact, in addition to proper follow-up treatment and the mildness of the respiratory diseases in this locality as compared to the central, northern and eastern portions of the United States, may account for the low mortality rate.

CONCLUSIONS

Acute infective laryngotracheobronchitis has been discussed with a summary of nineteen cases.

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Some Problems in Syphilis Control in Oklahoma*

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The purpose of this paper is to present some of the numerous problems encountered in the Control of Syphilis within the state and to show their solution depends upon the mutual cooperation of the practicing physician and the health officer. The more independent public health activities are of political control, the more effective the services rendered. The increased interest of the public in matters of public health and particularly during the last few years in syphilis control has been of great importance in the establishment of more permanent programs less subject to interruptions due to indifference and lack of support when the newness wears off.

Public Health work of any type owes its very existence to education and this is true of syphilis control. The publicity initiated by Surgeon General Parran has made the detection and treatment of syphilis an entirely different problem from what it was a few years ago. Instead of breaking down prejudices, our problem is to meet the demands for expansion of the program. In our attempt to educate the public it is well to get our information in hand so that we not only give them accurate information but try to make it uniform. Apparent discrepancies which mean nothing to the physician may cause considerable apprehension in the mind of a patient, so controversial methods in treatment should not be made too dogmatic and only the fundamental principles stressed.

The enlightened patient who has read magazine and newspaper articles on syphilis, who knows the "four stages of syphilis," how much treatment is the minimal requirement for cure and who comes in for darkfield examination on the first appearance of a lesion which may be a chancre contrasts sharply with the young man from Back Bay in the poem originally appearing in the Journal of the American Medical Association and expanded by members of Dr. J. E. Moore's clinic.

A LUETIC LYRIC

"There was a young man from Back Bay
Who thought syphilis just went away.
He thought that a chancre
Was just a mere canker
Derived from lascivious play.

But now he has acne vulgaris
(The kind that is rampant in Paris).
It covers his skin
From his head to his shin,
And his friends all ask where his hair is.

He has pains in his head and his knees.
His sphincters have gone by degrees.
Paradoxic incontinence,
With all its concomitants,
Brings quite unpredictable pees.

With sensations progressively number,
An aorta in need of a plumber,
His heart is cavorting,
His wife is aborting,
And withal he's developed a gumma.

There's more to this terrible plight.
His pupils won't react to light;
Along with his tabes
And sabre-shinned babies,
He also has gun-barrel sight.

Though treated in every known way,
The spirochetes grow day by day.
He's developed paresis,
Converses with Jesus,
And thinks he's the Queen of the May."

The well informed patient comes in for darkfield examination of the genital lesion which if negative is repeated two more times on consecutive days and if all three are negative he has serologic follow up for three months. A serologic test is made simultaneously with the first darkfield and thereafter once a week for the first month and

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once every two weeks for the next two months. If all are negative he is congratulated on his good fortune.

With the first positive, however, he is examined and started on continuous treatment without rest periods for eighteen months and has a spinal fluid examination during the second six months of treatment. With spinal fluid negative and the Wassermann also negative during the last twelve months of treatment he is assured by his physician that according to Cooperative Clinical Group studies his chances of developing late syphilitic lesions are very small, particularly neurosyphilis, and that he should have repeated serologic tests during the next year. At the end of that time he will have a complete physical and neurological examination, fluoroscopic search for evidence of aortic changes and a second spinal fluid determination. With all of these negative he anticipates no further trouble from his previous infection but reports to his physician every year or so for observation and his roentgenologist takes a fluoroscopic squint at his aorta every three to five years.

His wife did not abort, for serologic tests taken during each of her two pregnancies prior to his infection showed no indication of syphilis and after he informed her of his plight (she was not surprised for "prostatic weakness" and lack of interest in family duties suggested caution) she found her Wassermann still negative.

In the meantime, his physician learned from the health department that the two contacts had been located and examined. Miss S., a bachelor girl, was examined by her physician and found free of any infection. Mrs. J., a divorcee, was located on the Pacific Coast and as the report showed was taking treatment in "Sunny California." She is trying to forget and it is well she has become spirochete free as the negative serology of five subsequent contacts would indicate.

In contrast to the above case is the indigent boy who, leaving a C. C. C. camp with a letter stating that ten weeks of treatment had been given for primary syphilis and that continuation of treatment would be appreciated, applied for the twelve to eighteen months treatment he was told would be necessary. No clinics were established within thirty miles of his farm home so he was referred to a private physician and arsenicals and bismuth supplied. The physician doubting the diagnosis because of a negative serologic test at that time raised the question of mistaken diagnosis of a chancre and advised the boy to wait and see what would happen.

One of the problems involved in the treatment of syphilis is the management of the patient who began his treatment elsewhere. There are too many physicians still treating syphilis on suspicion to assume that every patient has had darkfield or serologic diagnosis or confirmation prior to the beginning of therapy. On the other hand, patients are so prone to forget that a darkfield had been done or the reaction of a blood test that their report is too often unreliable. It is very necessary that whenever possible a written statement accompany the patient or be sent to the physician not only giving the diagnosis data but also the amount of treatment given and the time it covered. Patients appearing in Health Department clinics have stated that treatment consisted of about six to eight 'shots' when investigation showed over forty doses each of arsenic and bismuth.

Because of lack of information as to previous therapy, many patients are practically started "all over again" on treatment when very little may be necessary. This is not only potentially injurious to the patient but a strain on his or the clinic's resources. A colored man, aged 63, with an infection dating back to his 17th year had received enough treatment to take care of four to six average cases of early syphilis. His only complaint was a positive blood test and that he was sent in for treatment. Spinal fluid examination had never been made and he showed no clinical signs of any late involvement.

The policy of the Health Department in its clinics is to:

Examine and classify all cases of syphilis and give as far as possible the appropriate treatment for the particular stage found and individualize treatment within reasonable limits.

To confirm all diagnoses with laboratory tests, darkfield, Wassermann, or spinal fluid.

To give the recommended duration of treatment of the Clinical Cooperative Group for uncomplicated syphilis — namely 18 months for early syphilis and two years for late latency — with yearly observation and re-examination and to give further treatment only as indicated by clinical findings.

To recommend routine spinal fluid examinations at the appropriate time for every patient. Where this cannot be done in clinics the patient is referred to the nearest source of consultative facilities.

To investigate source and spread contacts of all patients with early syphilis and get them into the proper hands for diagnosis and treatment.

Patients admitted to the clinics are required to present a certificate from a practicing physician indicating that he is indigent and

referring him to the clinic for treatment. Persons coming directly to the clinic are referred to a physician for treatment who may refer him back to the clinic if he is found to be indigent. In this way the personal relationship between physician and patient is maintained and whenever possible a patient is encouraged to finance his treatment so he may enjoy the independence of being on his own.

The cooperation of private physicians has been very valuable and greatly appreciated by the Health Department in the operation of the clinics. Numerous consultations have been available and from one clinic alone the spinal fluid examinations done by local physicians were surprisingly numerous.

In a study of the distribution of specialists over the state it is obvious that the treatment of syphilis in many areas is the responsibility of the general practitioner. In the heavily populated sections consultative facilities are readily available but very scattered in others where patients have to travel a considerable distance to reach a consultant. The Health Department is trying to make these facilities more available by making known the location of such facilities. The department is unable to arbitrarily determine who is and who may not be a consultatnt or expert on syphilis. The specialists concerned are dermatalogists, urologists, internists, pathologists, roentgenologists, ophatholmologists and pediatricians. Any member of the above groups will be considered a consultant in his field and practitioners will be referred to them as far as possible. It is impossible for the Health Department to cover the consultations necessary nor is it necessary or advisable in the case of private patients. This must be carried out by the men in private practice.

A brief questionnaire sent to members of several of the above organizations indicated readiness to cooperate and facilities which should be utilized. A list of the following facilities will be available from the Health Department on request:

13 Dermatologists are located in 5 counties, 77 counties in state.

24 Urologists are located in 14 counties.

60 Internists are located in 15 counties.

122 Eye, Ear, Nose and Throat are located in 39 counties.

42 Clinics are located in 35 counties.

54 Darkfield Microscopes are located in 20 counties.

62 Consultants distributed over the state will accept the refer of patients for examination and diagnosis for syphilis (including spinal fluid) and give the family physician recommendations for treatment.

The table showing the cases of syphilis and gonorrhea reported in 1937 and 1938 by counties does not by any means indicate the total number seen by physicians. However the increase over 1936 is remarkable. The reporting of cases is very important to the Health Department and the budget for arsenicals and other items for distribution must be based on statistics. The more complete the reporting becomes the better able is the Health Department to anticipate and provide for the needs of the following year.

The Health Department does not have adequate personnel to maintain all the clinics which are necessary over the state for indigent patients. Cooperative Clinics operated jointly by the Medical Societies and the Health Department have been started and new clinics will be opened as funds permit. The clinician is paid a modest remuneration but these clinics take a considerable load from the private practitioners who have previously treated the patients without any remuneration and frequently supplying the drugs besides. Arsenicals and bismuth will continue to be issued to those physicians who prefer to treat indigent patients in their offices.

The last and in many respects the most important problem is that of contacts and lapses. Control to be effecive must find the contacts of early syphilis and get the infectious person under treatment and keep them under treatment until permanently non-infectious. Until the physician becomes contact conscious and tries to get the contacts of each new case of infectious or potentially infectious syphilis, there is little that the Health authorities can do about them. The name of the physician and the name of the person who has supplied the information are not revealed to the contact who is investigated. He is requested to see his family physician to see if he has the disease and with the physicians report that he is free of infection or that he is under treatment if infected the investigation ceases. Family contacts should come to the physician for examination, and unless they have moved do not require the aid of the investigator. If the physician is convinced of the need of examining contacts he has little difficulty in convincing the family of the advantages of determining whether or not there are other infections in the family. Where the sexual contacts can not be brought in by the patient or sent to their family physician a letter to the Health Department with the name and address will receive prompt attention.

* * *

Reporting of Cases of Syphilis and Gonorrhea by Physicians for the Years 1937 and 1938 according to Counties.

County	Population	Syphilis		Gonorrhea	
		1937	1938	1937	1938
Adair	14,756	45	70	12	15
Alfalfa	15,228	10	5	9	3
Atoka	14,533	45	54	39	43
Beaver	11,452	7	4	27	12
Beckham	28,991	28	10	38	37
Blaine	20,452	18	21	32	22
Bryan	32,277	20	22	31	19
Caddo	50,779	50	14	16	27
Canadian	28,115	70	50	31	26
Carter	41,419	290	172	204	63
Cherokee	17,470	76	75	13	13
Choctaw	24,142	55	20	14	5
Cimarron	5,408	0	0	0	0
Cleveland	24,948	44	24	55	31
Coal	11,521	0	7	1	6
Comanche	34,317	300	117	226	190
Cotton	15,442	19	9	11	11
Craig	18,052	73	56	35	22
Creek	64,115	41	38	58	33
Custer	27,517	31	29	54	18
Delaware	15,370	25	19	12	15
Dewey	13,250	7	4	23	10
Ellis	10,541	7	7	4	4
Garfield	45,588	74	45	87	41
Garvin	31,401	40	61	93	48
Grady	47,638	58	46	52	28
Grant	14,150	5	1	1	0
Greer	20,282	9	6	3	4
Harmon	13,834	12	8	4	15
Harper	7,761	15	3	29	9
Haskell	16,216	14	7	12	3
Hughes	30,334	26	31	16	12
Jackson	28,910	90	90	30	33
Jefferson	17,392	12	21	5	2
Johnston	13,082	18	25	13	8
Kay	50,186	175	259	85	105
Kingfisher	15,960	11	42	15	18
Kiowa	29,630	7	7	7	9
Latimer	11,184	20	14	15	9
LeFlore	42,896	85	44	37	37
Lincoln	33,738	40	19	29	30
Logan	27,761	40	31	37	13
Love	9,639	1	5	0	2
McClain	21,575	31	27	44	26
McCurtain	34,759	80	93	60	26
McIntosh	24,924	33	37	36	21
Major	12,206	10	3	6	4
Marshall	11,026	14	27	34	11
Mayes	17,883	13	32	18	15
Murray	12,410	108	25	98	29
Muskogee	66 426	244	357	176	104
Noble	15,139	29	20	21	9
Nowata	13,611	44	24	35	7
Okfuskee	20,016	31	50	53	14
Oklahoma	221,738	655	773	744	835
Okmulgee	56,558	208	149	66	41
Osage	47,334	155	113	95	100
Ottawa	38,542	129	115	51	57
Pawnee	19,882	39	30	24	35
Payne	36,905	171	107	62	74
Pittsburg	50,778	115	96	156	61
Pontotoc	32,469	322	303	187	144
Pottawatomie	66,572	150	165	114	94
Pushmataha	14,744	10	49	23	46
Roger Mills	14,164	4	11	2	2
Rogers	18,956	33	28	34	30
Seminole	79,621	123	52	66	30
Sequoyah	19,505	44	100	33	38
Stephens	33,069	65	85	56	73
Texas	14,100	15	1	8	2
Tillman	24,390	35	51	17	24
Tulsa	187,574	373	416	303	274
Wagoner	22,428	100	43	51	18
Washington	27,777	59	54	50	26
Washita	29,435	37	21	13	8
Woods	17,005	29	19	39	24
Woodward	15,844	12	16	21	18

Tularemia*

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

G. R. BOOTH, M.D.
LE FLORE, OKLAHOMA

"Tularemia is a febrile disease produced by inoculation of the Bacterium tularense in man by a variety of wild animals and insects. The principal source of infection seems to be by handling and dressing wild rabbits." These lines were copied from a book written by a well known author on skin diseases.* The same author, in concluding his article, states that "the treatment is largely symptomatic and consists mainly of rest and surgical drainage of suppurating glands." It seems that there is no specific antiserum of proven value.

As there are compartively few reports in current literature dealing with tularemia, I have been especially interested in a series of twelve cases that it has been my privilege to observe during the past two years.

These reports are from the viewpoint of a country doctor. None of these patients were hospitalized. All blood examinations were by the Laboratory of the State Health Department. In all cases, the Blood Wassermann was negative, blood culture and stool for typhoid fever was negative. Cross agglutination B. Abortus and B. Melitensis was positive in about 50 per cent of the cases. Agglutination B. Tularense was positive in all cases (1:320 to 1:640 in all cases). In questionable cases, pulmonary tuberculosis was ruled out by x-ray and other examination in State T. B. Sanitarium. In oculoglandular cases diagnosis was confirmed by

*Andrews, G. C., Second Edition, 1938.

the consulting specialist. In age they range from 55 down to 13 years. In sex there are seven female and five male. All are farm people. As to type, we have three oculo-glandular cases, one of these bilateral. Neither of these show initial sore on finger. There are seven of the ulcero-glandular type; all of these had sore finger or gave clear history of having had such an ulcer. Two were seemingly of typhoid type from beginning. One of the oculo-glandular and one of the ulcero-glandular cases assumed the typhoid characteristics. The mortality is one case—8 1 3 per cent.

Six cases in this series showed very definite skin symptoms, these eruptions ranging from a very silght rash to an erytherma-multiforme-like eruption and herpetic lesions with central points of necrosis. This dermatitis was followed by desquamation. A severe dermatitis is the most important symptom, from the patient's point of view. The primary lesion is usually an indolent ulcer when first seen by the physician. This ulcer is usually on finger, is crater-like with base covered by necrotic material.

It is clearly impossible to review the case history in all of these, but I wish to do so in a few, fairly typical cases.

Case No. 1: Mrs. S., age 54, pulse 78, temperature 98.3; fairly well nourished; housewife. Reason for seeking advice: Has a lump approximately size of a hen egg in axilla and another about half this size at elbow. Not fluctuating, but cause some pain and pressure symptoms. These swollen glands began to develop 9 months prior to this time. She had sore finger and chill. She was treated for malaria because of the high fever and chills, these at irregular intervals. Was confined to bed for two weeks and sore finger entirely well in about four weeks.

Treatment: Bismuth Subsaliclate in oil, two grains each week, intramuscular. Also Sat. Sol. Potassium Iodide in massive doses. This was continued for six months. The enlarged glands disappeared without suppuration. Her present condition, two years after infection, is normal.

Case No. 2: S. C., a Choctaw Indian boy, age 18 years, weight 214 lbs., pulse 100, temperature 102. Typical sore on outer side of left hand. Has large mass of infected glands in axilla, not suppurating. All medical treatment refused, only wanted salve for sore hand. He returned in four weeks. At this time axillary glands were incised. About 100 cc of pus removed. Drainage continued during next sixty days. Present condition negative.

Case No. 3: T. C., white male, age 15 years, normal height and weight. On November 5, 1939, he, with help of a younger brother and an older sister dressed a rabbit. On November 15, he reported at office complaining of a sore eye. The lids of left eye were slightly swollen and looked much like a beginning trachoma. He developed a typical Parinauds conjunctivitis. The right eye became involved five days after the left. As is usual in the oculo-glandular type, there was no visible initial sore. The other children who assisted in dressing the game both had the typical sore on finger, chain of enlarged glands, etc. The oculo-glandular case was a very sick boy with temperature 102-104, irregularly-timed chills, sweating spells and irrational intervals. He died in coma, thirty-nine days after first appearance of eye symptoms, forty-nine days from date of probable infection. It is interesting to note that the eye condition cleared up within four weeks. He developed the typhoid type and except for fact that both stool and blood culture were negative, this would have been a beautiful case of typhoid fever.

Case No. 4: Mrs. W., an oculo-glandular case who had lesions of pellagra on hands and was being treated for pellagra when the Parinauds Conjunctivitis developed. She was unable to take sulfanilamide. Treatment was local for eye condition and continued use of thiamin chloride which was being used in treatment of pellagra. Her eye was in fair condition three weeks after first appearance of symptoms. Drainage from pre-auricular glands was slight, three months after incision. General condition good.

Treatment: In addition to symptomatic treatment, have used sulfanilamide in all acute cases. In one case it was abandoned because of uncontrollable vomiting. It was used in therapeutic doses until fever subsided and no more rigors or sweating spells. In some of these cases I used Neo-prontosil and sulfanilamide subcutaneously. Found no advantage over oral route. No attempt was made to estimate concentration of sulfanilamide in blood. The primary sore is necrotic, painful and indolent. Have found an ointment containing Urea, 2 per cent with Oxyquinoline benzoate .1 per cent, to be a satisfactory dressing.

SUMMARY AND IMPRESSIONS

Tularemia is probably more prevalent than statistics indicate. Treatment is unsatisfactory but sulfanilamide is worthy of trial and is tolerated by most patients.

Rabies Can Be Eliminated

Rabies or hydrophobia can be eliminated from the United States as it has been from other countries if citizens will cooperate with the authorities in rigid control of dogs and in prompt attention to dog bites, which are usually responsible for this disease in human beings, W. E. Aughinbaugh, M.D., New York, declares in the March issue of *Hygeia, The Health Magazine*.

EDITORIALS

ANNUAL MEETING

The members of the Tulsa County Medical Society are making every effort to develop the very best possible program and meeting of the State Association. This meeting will be held May 6th, 7th and 8th, with headquarters in the Mayo Hotel.

Dr. M. J. Searle, the general chairman, has appointed all Committees and they are hard at work with their respective duties seeing to it that all arrangements are completed for our edification and entertainment.

The following guest speakers have accepted our invitation to be present and address the general assembly: Dr. Horton Casparis, Pediatrician, Nashville; Dr. Alphonse McMahan, Internist and Vice-President of the A. M. A., St. Louis; Dr. E. H. Skinner, Radiologist, Kansas City; Dr. Curtis Rosser, Proctologist, Dallas. This galaxy of talent would alone assure any physician of an interesting and instructive program.

The section officers assure us of a full program in each section with both new material and some old material needing review or perhaps improved application.

Scientific and commercial exhibits have been arranged with an increase of exhibits in both divisions.

Everybody has a good time when they go to Tulsa. The Tulsa physicians and their wives know how to entertain and they do not take our visits as a "matter of course" but give freely of their time and hospitality. Your wife will want to shop, and see her friends and take in a good show so bring her along and let her have a good time while you "brush up" on things medical and surgical.

YOUR DUES

One last appeal for payment of all dues before April 1st.

Every County Secretary should ask for a Committee to assist him in contacting every physician who is eligible for membership thereby increasing our state membership to at least 1,551 and then we will have three members of the A. M. A. House of Delegates. This is the year for the reapportionment of Delegates to the A. M. A. and we should have this increased representation.

Remember the State dues are decreased to $10.00 this year and a physician can get more for his money than with any other like investment.

Don't be satisfied with the same old membership list in your County Society. Be sure to collect from all the old members and then add all the new ones possible.

This plea comes from every member who is interested in organized medicine and we ask for 100 per cent cooperation.

Do this before April 1st as this is the deadline as prescribed by the American Medical Association.

THE 1940 EARLY DIAGNOSIS CAMPAIGN

This is an annual program for the month of April, begun by the tuberculosis associations of the United States in 1928. Each year a slogan is adopted, selected to familiarize the public with certain modern discoveries or advances in the diagnosis, treatment and control of tuberculosis. It is largely selling ideas on the plan of commercial advertisers.

There is no vaccination against tuberculosis but education. From the Gallup poll it appears that only about half the people understand that the disease is transmitted by germs, even though the tubercle bacillus was discovered 58 years ago. This situation emphasizes the need for general public education. This lack of information accounts for much of the difficulty in prevention of tuberculosis, and for the delay of the individual in seeking a physician when there should be ample reason for suspecting tuberculosis.

The slogan for 1940 is "The X-ray Reveals Tuberculosis Before Symptoms Appear." One of the posters gives a shorter and snappier title or version "The X-ray Will Show It Before YOU Know It." This idea that what the tuberculosis associations of the country, sponsors of the campaign, are trying to put over is in line with medical advances that tuberculosis may as a rule be diagnosed by X-ray two years or more before the patient has any symptoms. Making a patient believe it, when by chance it is discovered ahead of symptoms, is a most difficult matter.

This problem becomes less difficult with a public tuberculosis consciousness, which the Early Diagnosis Campaign creates.

Physicians should lend their help to this annual program. An informed public enables the family doctor to help prevent tuberculosis, and to manage an early case when discovered. Early diagnosis, and acceptance of the fact by the patient, makes it more a matter of routine practice of medicine in-

stead of institutional care, most of which must be financed by the state.

Material to aid physicians in preparing articles for medical societies and club or other addresses will be furnished on request by the Oklahoma Tuberculosis and Health Association, 22 West 6th Street, Oklahoma City. There are special pamphlets, posters and a "Rotogravure Tabloid" for this year's campaign, the latter is a 4 page pictorial with 34 illustrations, designed for being made a supplement to newspapers, but suitable for public distribution in any other way. Copies of all these items will go out to all physicians on our "Tuberculosis Abstracts" mailing list. They will be sent to others on request. The State Association has three 16 mm sound films on tuberculosis, designed for public education. Any one of them will make a good luncheon club program. They are available, free, except payment of postage or express on return or to next assignment.

A successful Early Diagnosis Campaign in 1940 should result in better public cooperation in the eradication of tuberculosis because the slogan tells the World the first essential in diagnosis—the X-ray.

SMALL INDUSTRIES NEED PREVENTIVE MEDICAL AID

The valuable achievement which the medical profession would make by solving the problem of exteuding qualified preventive medical assistance to small plants, through the joint agencies of private practice and public health administration, is emphasized iu *The Journal of the American Medical Association* for February 17 in an editorial on "Medicine iu Industry."

"Industry deals with men as well as with machinery and materials," the editorial points out. "Only recently, however, has industry begun to realize that the man who operates the machine and who fabricates the material is its most valuable asset. As this conviction grows, fostered by both manufacturing and trade associations, employers are begiuning to look more and more to the medical professiou for assistance in couserving the physical welfare of man power. Already medicine has, under a variety of circumstances and in all types of industry, so convincingly demonstrated its value in reducing lost time from preventable accidents and diseases that it has come to be considered quite as indispensable as any other of industry's maintenance functions.

"Probably it will uever be easy to briug to industry generally the advantages of medical and engineering control over unhealthful industrial exposures. Aside from those ordinary activities of medical service in industry usually included under emergeucy surgery, industrial hygiene and physical supervision, the essential functions of industrial medicine demaud study of technogolie changes and the introduction of new materials, and the development of methods of control. These difficult procedures require integration and coordination, fuuctions which constitute for the profession at large the priucipal objectives of the Council on Industrial Health of the Americau Medical Association.

"Of equal complexity is the problem of unequal distribution of medical service to industry. Large plants, on the whole, have found themselves in the best position to organize medical services. Yet, contrary to common impression, industry in this country is made up predominantly of small units. Ninety-seven per cent of all manufacturing concerns employ fewer than 250 men, and almost 70,000 of them employ five wage earners or fewer. In this segment of industry, accident and disease experience is thought to be less favorable on the whole thau in large plants. In this same segment the principal medical serviee received is first aid and emergency surgery and care of compeusable disability. From the point of view of preventive industrial medical service, the tield of the small plant is almost unexplored. When it is found possible to extend qualified preventive medical assistauce to such concerns, through the joint agencies of private practice and public health admiuistration satisfactory to those who supply the service and to those who receive it, an achievement will have been recorded in which all elements in the medical profession can take lasting satisfaction."

Asked To Assist Finnish Relief Fund

An appeal to the members of the American Medical Association for assistance has reached the Journal through a letter from Dr. Kerwin W. Kiuard of New York City, director of the Medical Division, Finnish Relief Fund, Inc. Mr. Kinard's letter follows:

"The Finnish Relief Fund, Inc., is sponsored by Mr. Herbert Hoover. It is approved by the Finnish Minister in Washington, D. C., His Excellency Hjalmar Procope.

"It has the maiu purpose of accepting for the Finnish people and transmitting to Finland auy funds contributed for this great cause by the American people.

"Coutributious, unless specifically intended to be used for war material, will be used for food and clothing for the Finnish civilian population, many of whom are suddenly made homeless by having their houses irreparably demolished by the inceudiary bombs from Russian aeroplanes.

"Members of the American Medical Associatiou are the ouly doctors who will be asked to contribute through this Fuud.

"It is hoped the profession will respond as generously as possible. It is further hoped that every doctor will make some contribution, and not matter how small it may be, it will be gratefully accepted. We believe the profession should have one hundred per cent of its members become contributors to this most worthy cause.

"No money is deducted for expenses from any contribution made through this Fund, and every dollar donated arrives in Finland worth one hundred ceuts.

"No salaries are paid aud no financial remunerations are made to officers on duty with the Finnish Relief Fund. Expert auditors make a daily checkup of the donations acquired and chart the results.

"The National Chairman of the Medical Division of the Professional Groups of the Finnish Relief Fund, Inc., is Dr. John Frederick Erdmann of New York.

"A director (chairman) for the Medical Division has been or will be appointed from each state who will try to get in touch with every member of the American Medical Association of that state by such method as he deems best.

"The Executive Director of the Medical Division is Dr. Kerwin W. Kinard who has offices at Fund headquarters.

"All checks should be made payable to the Finuish Relief Fund, Inc., and sent to the Medical Division of the Finnish Relief Fund Inc., 420 Lexington Avenue, New York, N. Y."

Art Association Exhibit Planned

The American Physicians' Art Association will hold its anuual exhibit, June 9-15, during the time of the annual session of the Americau Medical Association in New York, according to the Journal of the A. M. A. The headquarters of the Physicians' Art Associatiou will be located in a booth, which Mead Johnson and Co. has douated, on the third floor of the technical exhibits at the Grand Central Palace on Lexington Avenue.

• THE PRESIDENT'S PAGE •

The Oklahoma State Medical Association from its inception has constantly striven to give to the people of this great Commonwealth the best in medical services. To render this service, the profession as a whole has constantly and of its own volition subscribed to the principles of progressive medicine. The profession, beset through the ages with one obstacle after another, always has met the test with dignity and decorum. It will continue to conduct itself in this manner.

Since January 1, 1939, until the present time, the record of your Association in the field of progressive medicine, judged by the voluntary enrollments in the post-graduate courses offered by the Association to its members, is a record unsurpassed in my opinion by any other like group.

As of March 1 of this year, 805 physicians had completed a ten-week course in obstetrics, these same physicians attending an average of 84 per cent of the ten lectures, and many of them traveled 40 or 50 miles to avail themselves of the opportunity. During the first months of the post-graduate course in cancer in twenty cities of eastern and central Oklahoma, 519 physicians attended the lecture on the malady that is the second largest cause of death in the United States.

Seven weeks from now, probably 1,000 physicians will pay their own expenses to Tulsa for the Annual Meeting of the Association in order to sponsor scientific sections in all branches of medicine, and to gain additional knowledge from leaders in chosen fields.

You should be justly proud of your Association and your membership in it.

W. N. Howard

President.

ASSOCIATION ACTIVITIES

Annual Meeting Is Expected To Draw Record Attendance

Preliminary plans for the forty-eighth annual meeting of the Oklahoma State Medical Association are nearly complete, and Tulsa physicians, who will be hosts to the state doctors this year, are preparing for a record attendance at the event, scheduled for May 6, 7, and 8.

Headquarters will be at the Mayo Hotel, where registration will open at 8:30 o'clock Monday morning, May 6. With a registration of 807 chalked up for the meeting in Oklahoma City last year, indications are that the record will be broken in Tulsa in 1940, with mounting enthusiasm evident throughout the state. Membership cards for 1940 must be presented at the registration desk.

Headlining the list of guest speakers will be Dr. Alphonse McMahon of St. Louis, Mo., vice-president of the American Medical Association. Adding interest to the guest speaker program also will be Dr. Edward H. Skinner of Kansas City, Mo., Dr. Curtis Rosser of Dallas, Texas, and Dr. H. R. Casparis of the Vanderbilt University Hospital, Nashville, Tennessee.

In addition to the scientific program, the Tulsa County Medical Society is sponsoring a "Hall of Health," expected to be an outstanding feature of the three-day meeting. Among those things to be seen will be the Lindbergh heart and the "transparent woman."

Changing from the usual procedure, the scientific sections this year will meet in the morning, with the general scientific meetings at which the guest speakers will appear scheduled for the afternoon.

Scientific exhibits not only will be those of doctors of the State of Oklahoma, but also there will be several from the American Medical Association. The commercial exhibits, which are certain to be of interest to every doctor, are expected to be the finest ever displayed.

An innovation already receiving favorable comment and which is expected to be of great value will be the luncheon of the secretaries of the county medical societies scheduled for Wednesday noon.

Entertainment features likewise have received their share of attention from the committee, and fun as well as education is expected to color the convention. A golf tournament and a dance already have been planned. Wives of the state physicians will be the guests of the Women's Auxiliary of the Tulsa County Medical Society.

Principal business of the House of Delegates will be to act upon the constitution amendments and by-laws introduced at the last May meeting. Those amendments to be acted upon appear elsewhere in this issue.

Arrangements for the annual meeting are being handled by Dr. Maurice Searle of Tulsa, general chairman.

Program plans, when complete, will appear in the April issue of the Journal.

Statewide Cancer Program Draws To Close This Month

Overwhelming success, marking the course of the statewide Cancer Program in its first month, appeared assured for the entire undertaking, as growing interest in the lectures forecast record attendance in the centers scheduled for the second half.

Press comment and expressions from individual doctors have signified the fact that this type of educational program is being enthusiastically received, and favorable results already are evident.

Speaking before a total lay audience of 6,919 by actual count during the first four weeks of the program, Dr. J. Samuel Binkley, lecturer and instructor, expressed great satisfaction with the reception the program has been given. Physician attendance at the evening medical meetings totalled 519, or approximately 80 per cent of the available doctors, members of the State Association, in the areas in which Doctor Binkley has spoken.

In addition to the regular lay meetings, the instructor has been guest speaker at meetings of Chambers of Commerce, civic clubs, and college assemblies on frequent occasions. Through advance publicity and growing understanding of the magnitude of the program, larger audiences greet Doctor Binkley as the course progresses.

Scientific angles of the subjects are discussed at the evening medical meetings, varying from the non-scientific talks at the lay meetings, where the necessity for early diagnosis and treatment of cancer is the theme of the lectures. Clinics for the benefit of the doctors have been arranged in several centers.

Attendance records for the first month are as follows:

First week, beginning February 5: Miami, 188, lay meeting; 16, medical meeting; Vinita, 437, lay; 16, medical; Claremore, 85, lay; 14, medical; Bartlesville, 260, lay; 15, medical; Tulsa, 500, lay; 44, medical.

Second week, beginning February 12; Henryetta, 244, lay; 42 medical; Muskogee, 220, lay; 38, medical; Tahlequah, 175, lay; 20, medical; Poteau, 175, lay; 17 medical; McAlester, 105, lay; 25, medical.

Third week, beginning February 19: Hugo, 300, lay; 23, medical; Durant, 389, lay; 16, medical; Ardmore, 300, lay; 20, medical; Pauls Valley, 520, lay; 11, medical; Ada, 650, lay; 26, medical.

Fourth week, beginning February 26: Seminole, 216, lay; 35, medical; Shawnee, 1010, lay; 19, medical; Norman, 315, lay; 45, medical; Chickasha, 620, lay; 37, medical; El Reno, 210, lay; 15, medical.

Appointments of Dr. Audre Blythe Carney of Tulsa as a fellow in the International College of Surgeons was announced following the recent meeting of the group in Venice, Fla.

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N. Y. W. F. 1940

PROPOSED AMENDMENTS TO CONSTITUTION

In compliance with Article XIII of the Constitution of the Oklahoma State Medical Association, the Constitution, embodying proposed amendments to be acted upon at the annual meeting in Tulsa May 6, 7, and 8, is hereby published. The proposed amendments should be carefully studied by the delegates to the meeting. Mimeographed copies have been sent to all county societies.

ARTICLE 1—TITLE

The name of this organization is the Oklahoma State Medical Association.

ARTICLE 2—PURPOSE OF THE ASSOCIATION

The object for which the Association is formed is to promote the science and art of medicine.

ARTICLE 3—COMPONENT SOCIETIES

The membership of the Association shall be organized into county medical societies or district medical societies, as circumstances may direct and as the Association may determine. The name and function of each such society and its relations to the Association shall be defined in a charter issued by the Association, subject to amendment and revocation by the Association in accordance with such terms as may be prescribed in the By-Laws of the Association.

ARTICLE 4—MEMBERSHIP

The membership of this Association shall be comprised of all members in good standing of its component societies as indicated by the membership records of the Association.

ARTICLE 5—HOUSE OF DELEGATES

Section 1. The House of Delegates shall be composed of (1) Delegates elected by the component county and district societies of the Association. (2) The officers of the Association enumerated in Article 8, Section 1, of this Constitution.

AMENDMENT offered by Dr. Aisenstadt: "Amend Article 5, Section 1 by adding (3) The Oklahoma delegates to the American Medical Association."

Section 2. All legislative powers of the Association reside in the House of Delegates which alone shall have authority to determine the policies of the Association. The House of Delegates shall transact all business of the Association, directly or through agencies or agents created by it, the transaction of which is not vested by this Constitution in any other agency. The House of Delegates shall elect the general officers of the Association.

Section 3. The House of Delegates shall provide for a division of the scientific work of the Association into such sections or departments, as in the judgment of the House, will best promote the scientific and professional activities of the Association.

Section 4. The House of Delegates may provide for the organization of such Councilor District Societies as, in its judgment, will promote the best interests of the profession, but the membership of any such society shall be limited to members of the component county societies of which it is made up.

Section 5. The House of Delegates shall divide the state into councilor districts specifying which county or counties shall be in each district.

AMENDMENT offered by Dr. McNeill: "Add to Article 5, Section 6. All proposed medical legislation before the Oklahoma State Legislature must have the sanction of the House of Delegates before it receives the support of the Oklahoma State Medical Association."

ARTICLE 6—THE COUNCIL

Section 1. The Council, shall consist of one councilor elected from each councilor district, the President, Secretary-Treasurer and Speaker of the House of Delegates of the Association.

AMENDMENT offered by Dr. Ritzhaupt: "Amend Article 6, Section 1 by inserting after the word 'President' and before the words 'Secretary-Treasurer' the words 'President-Elect'."

Section 2. The Council shall be the Executive Board of this Association and shall carry out the mandates and policies of the Association which are determined by the House of Delegates. The Council shall have supervision and control of the finances and particularly the expenditures of the Association, the investment of its funds, and the direction and control of its property.

Section 3. The Council shall meet at least once during the annual session, and on call by the President between annual sessions of the Association on his own initiative or by petition to the President by at least one-third of the members of the Council.

ARTICLE 7—SESSIONS AND MEETINGS

Section 1. The Association shall hold an annual session at such a place and time as shall be determined by the House of Delegates. For good and sufficient reason, the annual meeting place may be changed by a three-fourths vote of the Council.

AMENDMENT offered by Dr. L. S. Willour: "Amend Article 7, Section 1 by striking in line one after the word 'place' and before the word 'as' the words 'and time'."

Section 2. During the annual session there shall be at least one general meeting open to all registered members and guests; at least one meeting of the House of Delegates, either immediately preceding, during the session, or immediately following; and at least one meeting of the Council.

Section 3. The Council, by a vote of two-thirds of its entire membership, may call a special meeting of the Association or a Special meeting of the House of Delegates, and upon petition by thirty (30) or more Delegates, the Council shall call such a meeting. At any such meeting no business shall be transacted except that specified in the call.

AMENDMENT offered by Dr. Willour: "Amend Article 7, Section 3 in line three by striking the word 'council' and inserting the word 'President'."

ARTICLE 8—GENERAL OFFICERS

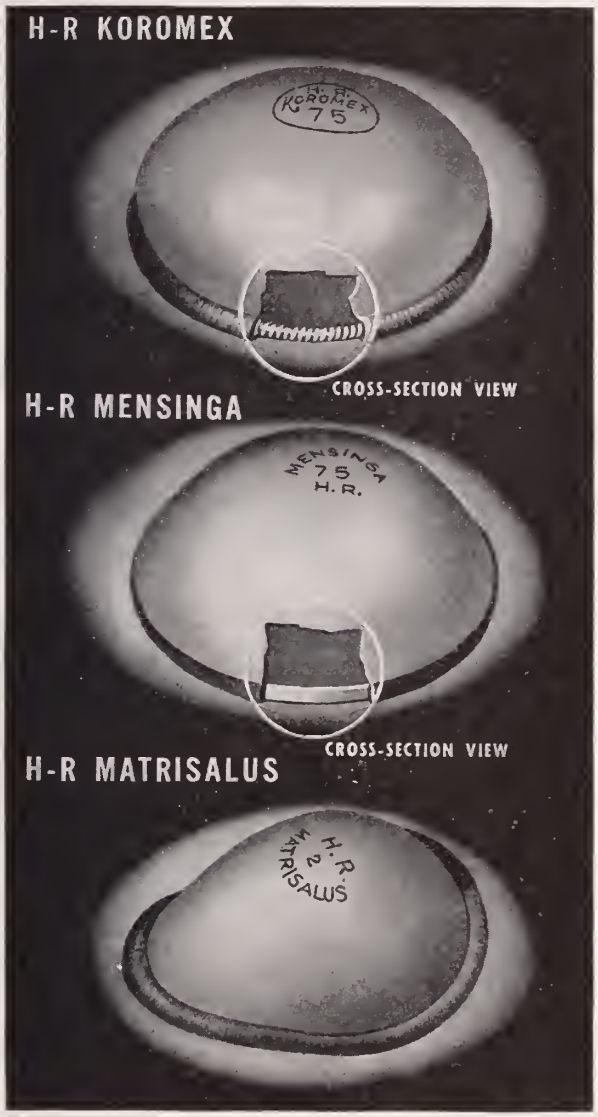
Section 1. The general officers of the Association shall be: President, President-Elect, Vice-President, Secretary-Treasurer, Speaker and Vice-Speaker of the House of Delegates and twelve councilors.

AMENDMENT offered by Dr. Garrison: "Amend Article 8, Section 1 in line three after the word 'and' and before the word 'Councilor' by striking the word 'twelve' and inserting the words 'number of', and after the word 'councilors' insert the following: 'as fixed by the House of Delegates'."

AMENDMENT offered by Dr. Wiley: "Amend Article 8, Section 1 to read: 'The general officers of the Association shall be the President, President-Elect, Vice-President, Secretary-Treasurer, Speaker and Vice-Speaker of the House of Delegates and ten councilors or less'."

Section 2. The President-Elect and Vice-President shall be elected for a term of one year: The Secretary-Treasurer, Speaker of the House of Delegates and Vice-Speaker of the House of Delegates for two years; and the Councilors for three years, the Councilors being divided into classes so that one-third of the Councilors shall be elected each year.

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AMENDMENT offered by Dr. Willour: "Amend Article 8, Section 2 by inserting after the words 'one-third' and before the word 'of' the words 'or approximately'."

Section 3. All of the above officers shall assume the duties of their respective offices immediately upon the close of the annual session at which they were elected and to serve until their successors have been elected and installed.

Section 4. Vacancies created by the death, resignation, or removal of the above named officers shall be filled by temporary appointment by the Council, such appointment being effective until the next annual meeting of the House of Delegates, which shall elect a successor to complete the unexpired term, if any.

AMENDMENT offered by Dr. Wiley: "Amend Article 8, Section 4 by adding to the end of the Section the following: 'except the President, whose place shall be filled by the Vice-President'."

ARTICLE 9—FINANCE

Section 1. Funds for meeting the expenses of the Association may be arranged for by the House of Delegates by an equal per capita assessment upon each component county or district society. The amount of such assessment shall be fixed by the House of Delegates. Funds may also be appropriated by voluntary contributions requested by resolution of the House of Delegates, and in any other manner approved by the House of Delegates. The secretary of each component society shall collect from its respective members all dues so assessed.

Section 2. The Council shall submit an annual budget for approval by the House of Delegates, detailing its financial needs for the ensuing year, and the House of Delegates shall make appropriations to satisfy the amount involved of such budget requirements.

ARTICLE 10—REFERENDUM

Section 1. At any session of the House of Delegates, the House may by two-thirds vote of its registered members submit any question to the membership of the Association for its vote. A majority vote of all the members of the Association shall determine the question.

Section 2. The Council shall be in charge of the referendum and may designate an officer of the Association or a Committee to canvass the vote and announce the results.

ARTICLE 11—SEAL

The Association shall have a common seal. The power to change or renew the seal shall rest with the House of Delegates.

ARTICLE 12—ETHICS

Principles of Medical Ethics of the American Medical Association in force at the time of the adoption of this Constitution, and as they may from time to time be thereafter amended by the American Medical Association, shall be accepted as the Principles of Medical Ethics of the Oklahoma State Medical Association and is binding on its members and component county and district societies.

ARTICLE 13—AMENDMENTS

The House of Delegates may amend any article of this Constitution by a two thirds vote of the delegates present at any annual session: Provided, that such amendment shall have been presented to the House of Delegates at the previous annual session, or that it shall have been recommended by the Council and published twice during the year in THE JOURNAL of the Oklahoma Medical Association, or that it shall have been sent officially to each component society at least two months before the meeting at which final action is to be taken.

AMENDMENT offered by Dr. Aisenstadt: "Strike the entire Article and substitute therefore the following: "The House of Delegates may amend any article of this Constitution or any Section or part thereof by a two-thirds vote of the Delegates registered at any Annual Session, provided that copies of the proposed amendment be sent with notices to the various component societies at least sixty (60) days before the Annual Meeting, and that the proposed amendments be published at least once during the year in the Journal, and that no such amendments become effective until the close of the Annual Session."

ARTICLE 14

Upon the adoption of this constitution all previous Constitutions are thereby repealed, and all By-Laws and enactments in conflict with this Constitution are declared as of no effect.

Opportunities For Practice Reported

Mr. A. D. Sparr, Sparr's Drug Store, Bluff City, Kansas, writes that there is an opening in that city for a physician. All communications concerning this opportunity for practice should be addressed to Mr. Sparr.

Mr. Melvin G. Howe, Palace Drug Store, Wellington, Texas, reports that there is need for another physician in that locality. Wellington is the county seat of about 4,500 population, with a large trade territory and good schools. The office is furnished and utility bills are paid. Anyone interested should communicate with Mr. Howe.

New Assistant Medical Superintendent

Dr. C. R. Rayburn, a member of the Central State Hospital staff in Norman for the past 15 years, has been named assistant medical superintendent, replacing Dr. J. J. Gable, who resigned because of ill health.

Doctor Rayburn received his doctor of medicine degree from the University of Oklahoma School of Medicine, and at intervals during his service at the hospital has done special study with experts in neurology.

Doctor Gable now is living in Vista, California, where he went several months ago for his health.

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Indian Health Discussed At Convention

Education and health were the topics of discussion when more than 350 employes of the United States Indian Service convened in Oklahoma City in mid-February for a two-day annual session.

Dr. D. W. Gillick, head of this region's Indian health service, presided over a meeting and discussion of the doctors and nurses in the medical service. New methods in treating Indian diseases, and in making medical facilities available to all Indians, were discussed. Among those attending from Washington was Miss Edna A. Gerken, supervisor of health education.

Washington-Nowata Society Bares Record

Individual as well as group interest in their county society was revealed in the 1939 attendance record sheet of the Washington-Nowata County Medical Society, excellently prepared by Dr. J. V. Athey of Bartlesville, Secretary.

Of the thirty-one members of the society, which includes physicians of both Washington and Nowata counties, three can boast of a perfect attendance record during the year. Present at all fourteen meetings during 1939 were Dr. Athey, Dr. E. E. Beechwood of Bartlesville, and Dr. J. P. Torrey of Bartlesville.

With a record of having missed but one session, Dr. W. H. Shipman of Bartlesville was not far behind in percentage. Each with a percentage of 85 per cent, or attendance at 12 meetings were Dr. H. G. Crawford, Dr. G. V. Dorsheimer, Dr. F. S. Etter, Dr. O. I. Green, Dr. L. D. Hudson, Dr. S. M. Parks, and Dr. J. P. Vansant, all of Bartlesville. The average attendance for the entire year was 57 per cent.

Noted Surgeon At Internists' Clinic

Dr. Russell Best of Omaha, Neb., outstanding surgeon of the middle west, was the principal speaker at the annual Washington's Birthday Clinic conducted in February at the State University Hospital, Oklahoma City, by the Oklahoma City Internists' Association, with the cooperation of the hospital.

His talk with slide demonstrations on "Non-Surgical Flush of the Biliary Tract" was excellent and of much interest to the Internists.

Forty men interested mostly in Internal Medicine compose the organizations. The intention is to make these clinics, an annual affair, of practical value to the men attending, as well as to show diagnostic problems and cases of unusual occurrence. All doctors of the state are invited to attend.

Dr. Everett S. Lain of Oklahoma City was a guest speaker at the midwinter Dental Society meeting in Chicago last month.

Plans for a completely remodeled hospital were begun in Blackwell recently when nine of the city's practicing doctors of medicine leased the Blackwell Hospital building and started plans for its conversion into a modern structure. Blackwell doctors participating are Dr. A. S. Risser, Dr. Merl Clift, Dr. Philip C. Risser, Dr. L. I. Wright, Dr. J. G. Ghormley, Dr. L. H. Becker, Dr. John R. Curry, Dr. M. S. White, and Dr. R. R. Kinsinger.

Dr. LeMon Clark of Oklahoma City was the principal speaker at the recent meeting of the Cleveland County Medical Society in Norman. His subject was "Birth Control." Discussions on the technical aspects of the subject followed the talk.

Papers were read by Dr. H. C. Weber and Dr. J. V. Athey at the February dinner meeting of the Washington-Nowata County Medical Society held at the Presbyterian church in Nowata. A round table discussion followed the dinner. The program was arranged by Dr. S. A. Lang of Nowata, vice-president of the society.

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*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.

Two out-of-state speakers featured the program of the Kay County Medical Society meeting in Ponca City February 22. Dr. Wayne Bartlett of Wichita spoke on "Goiter Surgery," and Dr. Arthur Ashmore, superintendent of the Sedgwick County Tubercular Sanitarium at Wichita, talked on "Tuberculosis."

Dr. Francis S. Crane has closed his office in Wagoner to accept appointment as camp doctor assigned to the Civilian Conservation Corps veterans camp at Wilburton.

Dr. C. H. Cooke, secretary of the Noble County Medical Society, was a member of one of the first Boy Scout troops organized in Wichita, Kan., thirty years ago when Boy Scout troops were first organized in America. Doctor Cooke kept up his scouting work from 1910 until he entered college, and kept his registration in the scout organization for two years after that.

A one o'clock luncheon at the Y. W. C. A. followed the morning meeting of the Women's Auxiliary of the Oklahoma County Medical Society in Oklahoma City February 28. Hostesses were Mrs. Lea A. Riely, Mrs. Robert U. Patterson, Mrs. A. S. Phelps, Mrs. L. M. Westfall, and Mrs. A. M. Young. Following the morning business session, Mrs. Henry H. Turner discussed the policies of the American Medical Association.

Formal open house was held in late February at the new clinic established by Dr. Paul Lingenfelter and Dr. W. C. Tisdal of Clinton. The doctors moved into the new location on January 20 after the building had been redecorated and remodeled along modernistic lines.

Favorable action for an additional appropriation of $25,000 for new buildings at the Shawnee Indian Sanatorium has been voted by the house appropriations committee. The funds will provide new quarters for patients at the institution which consist entirely of enrolled Indians suffering from tuberculosis.

Dr. W. K. Haynie of Durant has resigned as city health officer of Durant because of the burden of his duties as county health officer and other business. He was succeeded in the city position by Dr. Charles G. Price.

Approximately 1,500 people were given treatments and immunizations by the Muskogee city-county health unit during January. The curative section, of which Dr. C. L. Oglesbee is physician, treated 523 patients. Approximately 400 were treated by the preventive section in maternity service, tuberculosis control and venereal control work, and about 450 immunized against contagious diseases.

Dr. George H. Kimball of Oklahoma City read a paper before the Osage County Medical Society at its monthly meeting February 12 at the Duncan Hotel in Pawhuska. His subject was "Principles of Plastic Surgery."

Dr. R. G. Obermiller and family of Ponca City have left for Texhoma, where Dr. Obermiller will continue his practice. He had been in Ponca City for the past six years, serving during 1939 as secretary of the Kay County Medical Society.

New Aid For Treating Inverted Womb

A means of treating a comparatively rare but serious complication of childbirth is reported in *The Journal of the American Medical Association* for February 24 by August F. Daro, M.D., Byford F. Heskett, M.D., and Herbert A. Schiller, M.D., Chicago. They cite three cases wherein the womb had turned inside out during delivery and in which the correction of the condition was aided by administration of epinephrine hydrochloride.

News From The State Health Department

Oklahoma was one of 40 states showing a decrease in the maternal mortality rate and one of 36 states showing a lower infant mortality rate in 1938, statistics issued by the United States Bureau of the Census show.

The maternal mortality rate for 1938 in the United States was 43.5 per 10,000 live births and the infant mortality rate was 51 per 1,000 live births, the lowest rates on record for this country.

The maternal mortality rate for 1938 was 11 per cent lower than that for 1937, 23 per cent lower than that for 1936 and 25 per cent lower than that of 1934, the year prior to the passage of the Social Security Act by Congress. The infant mortality rate for 1938 was six per cent lower than that of 1937, 11 per cent lower than that of 1936, and 15 per cent lower than that of 1934.

The striking reductions have been attained in a period in which every state, in cooperation with the federal government, has been actively working for improvement in maternal and child-health conditions, the state health department pointed out.

The maternal mortality rate in Oklahoma was 42 per 10,000 live births in 1938, compared with 52 in 1937 and 62 in 1936, placing Oklahoma in the group of 17 states showing "statistically significant" decreases. Oklahoma's rate was 29 lower than the mean or average rate.

Oklahoma's infant mortality rate was 49 per 1,000 live births in 1938, compared with 57 in 1937 and 60 in 1936. The infant mortality rate in Oklahoma is higher than in 25 other states. However, Oklahoma's reduction in the infant mortality rate was great enough to include the state among the 22 showing "statistically significant" decreases.

Oklahoma had 185 maternal and 2,167 infant deaths in 1938.

A library with emphasis on public health will be placed in use early in April by the state health department.

The library, to be located in the state health department offices, Oklahoma City, will contain material which might prove valuable to the private physician at certain times, G. F. Mathews, Commissioner of the state health department, pointed out.

Material will be offered to public health workers, and to private physicians.

As an example, the library will maintain current files, compiling latest records on prevalence of certain diseases, medical writing on new treatments, and trends of diseases. Information along this line will be furnished physicians on request.

Books pertaining to the various phases of public health will also be placed in the library, for use of those in the units throughout the state.

Doctor Mathews pointed out that the library will be established to serve a need similar to the one met by the state law library, where any member of the profession may go for reference.

Drugs, sera and laboratory service designed to materially reduce the death rate of pneumonia among people who have never before had an opportunity to obtain such services have been recently made possible in Oklahoma City and Tulsa, through the cooperation of the State Health Department, the Oklahoma County Medical Association, the Tulsa County Medical Society, and the Department of Bacteriology of the University of Oklahoma School of Medicine.

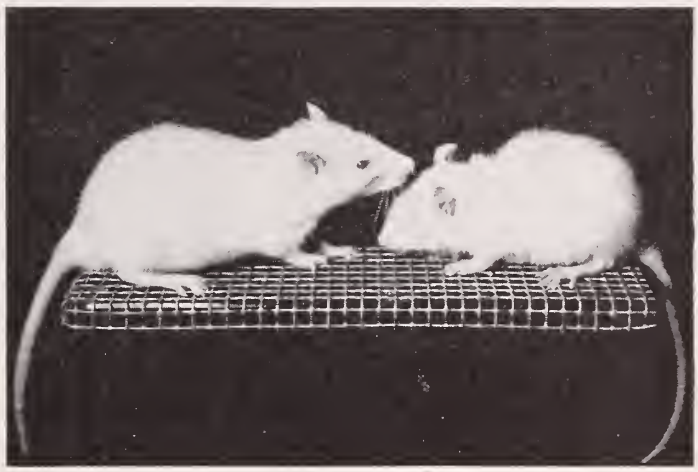
Laboratory services have been placed at the disposal of physicians in the two cities, enabling more prompt and accurate diagnosis of pneumonia. Specific drugs

STUDIES IN THE AVITAMINOSES

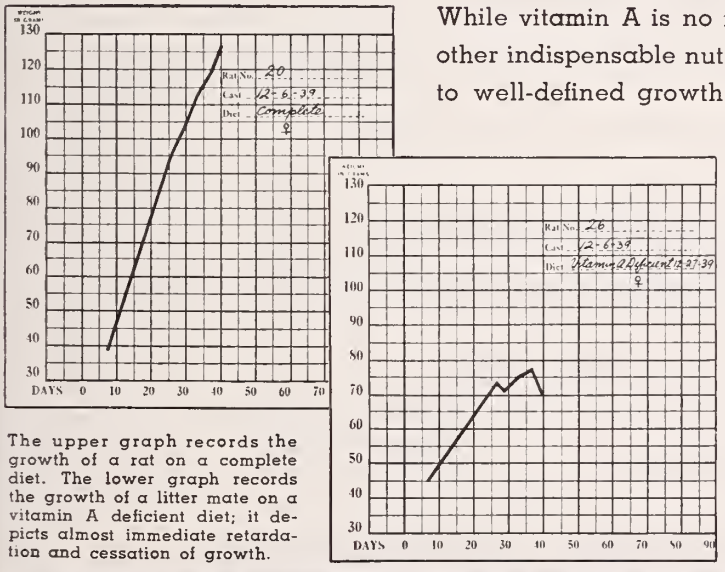


This page is the third of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the March 9 issue of The Journal of the American Medical Association.

INHIBITION of growth in the rat produced by restriction of vitamin A in the diet. The animals, litter mates, were 21 days old at the start of the experiment which was continued for 33 days. The animal at right received a diet containing all nutritive substances except vitamin A; the animal at left, an adequate diet. Note the xerophthalmia in vitamin A deprived rat.



Retardation of Growth Due to Vitamin A Deficiency



The upper graph records the growth of a rat on a complete diet. The lower graph records the growth of a litter mate on a vitamin A deficient diet; it depicts almost immediate retardation and cessation of growth.

While vitamin A is no more essential for growth than are other indispensable nutritional factors, its deprivation leads to well-defined growth retardation in man as well as in experimental animals. This action is so predictable that it is employed as a basis for one of the methods of vitamin A assay. The immediate effect of vitamin A deficiency on growth is cessation of endochondral bone formation. The curves reproduced illustrate the prompt growth-inhibiting effect of vitamin A deprivation in rats.

UPJOHN

and type specific sera are being furnished. The facilities have been made available, without cost, to those patients who are unable to pay for them and are unable to obtain them elsewhere. Request of the physician for the service is accepted as proof that the patient is entitled to receive it.

The service operates in this manner:

The physician calls on a patient and makes a clinical diagnosis of pneumonia. He then requests sulfapyridine from his nearest pneumonia control station. It is highly recommended that before he starts the patient on sulfapyridine, that he submit a sputum for typing to the control station and also have specimens obtained for blood culture, complete blood counts and urinalyses, and that further specimens be obtained for blood counts and urinalyses, while taking sulfapyridine at 48 and 96 hours. If the patient does not respond to sulfapyridine in 24 hours to 48 hours and a sputum has not been previously typed, the control station can then furnish typed specific serum for the patient.

The department hopes to enlarge the program next autumn. Spokesmen were optimistic, expressing the belief that a broadened program making proper medicines available for persons otherwise unable to obtain them will reduce the pneumonia death rate sharply in the state.

Grants For Sex Research

Applications to the National Research Council for funds to support study of fundamental problems of sex and reproduction should be received before April 1, it has been announced by *Science*.

They may be addressed to the chairman of the committee for research in problems of sex, Robert M. Yerkes, Sc. D., Yale University School of Medicine, New Haven, Conn. Preference will be given to proposals for the investigation of neurologic, psychologic and behavior problems.

Human Heart Is Like An Engine

The human heart is an engine that functions with miraculous efficiency if its owner will cooperate by refusing to overburden it unnecessarily, George A. Skinner, M.D., Berkeley, Calif., declares in *Hygeia, The Health Magazine* for March.

The heart, like other engines, functions best after a period of "warming up," he says. The sudden acceleration of the heart that always accompanies suddenly increased activities is likely to cause disturbance. For example, he points out, "Numerous business and professional men are so occupied with routine duties, most of which are sedentary, that they do little to keep up regular physical exercise. Unfortunately, the usual efforts to get in a week's or a month's exercise in a single afternoon are not a success, never have been and never will be. Muscles to be in good condition (and the heart is a powerful muscle) must be used regularly and often, even if not for long each time. A small amount of exercise taken daily is much more valuable to the whole physical economy than an excessive amount occasionally. The former is of lasting benefit, the latter likely to be not only harmful but often actually destructive."

Practically every human being starts life with a perfect "engine," Dr. Skinner declares. Although the heart is able to protect itself partially against many influences that affect other parts of the body, all acute diseases have some effect on it, for it must often work under difficult conditions during such periods. Such diseases as rheumatic fever, syphilis and gonorrhea are ones which have the most pronounced effects on the heart.

The heart may also be impaired by the formation of damaging chemical substances in the body, as the result of eating more than the body can utilize, not getting rid of the wastes properly or imbibing or inhaling substances such as alcohol, tobacco and drugs.

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Comments on National Hospital Act*

The February issue of the Journal carried President Roosevelt's message on the National Hospital Act of 1940. The following excerpt from *Hospital Management* gives the views of several leading hospital administrators in the United States, including those of Dr. E. T. Olsen, President of the Oklahoma State Hospital Association.

The announcement of President Roosevelt's proposal for federal financing of the erection of small hospitals in selected areas too poor to erect their own was so lacking in details that it has been impossible for anyone to accurately evaluate it. Comments received by *Hospital Management* this month, however, indicate that a study of the small amount of information given through news releases has raised serious questions in the minds of hospital executives.

The opinions expressed by Dr. Lucius Wilson of John Sealy Hospital, Galveston, Texas, are typical of those received from hospital administrators in every section of the United States.

"If a community is too poor to erect its own hospital," Dr. Wilson writes, "it most likely will be too poor to properly finance one erected by the government. No doubt, there are many communities in the United States in which assurances can be obtained that hospitals erected by the government will be operated, but it is doubtful if these assurances would stand the test of time.

"Should a community find itself unable to meet the obligations it has undertaken, one of two conditions will result. Either the government must operate the hospital at its own expense or permit the community to operate it in an underfinanced manner. The first condition will be an extension of the government entrance into competition with voluntary hospitals; the second will result in the tendency to lower the standards of hospital service.

"Another question of vital importance is the obtaining of the proper personnel in poor communities to operate the hospital.

"Would it not seem wiser," Dr. Wilson continues, "for the government to allot the money the President proposes to use for this project to support voluntary hospitals already in existence? A program could be worked out whereby the needy sick of the poor communities could be transported to existing hospitals, receive adequate care and the hospital benefit by the money obtained from the service it renders. It is difficult to understand why the government during the past few years has consistently proposed to build new hospitals when today there are so many unoccupied beds in the United States. Unoccupied beds mean loss of revenue, and loss of revenue means difficulty in maintaining high standards. If the effort that has been exerted by the government toward erection of new hospitals could have been directed toward the support of hospitals already in existence, a great public service would have been accomplished and the health needs of the people more adequately met."

The comments of Asa S. Bacon, superintendent of Presbyterian Hospital, Chicago, are along the same trend: "Recent surveys have shown that, with possibly few exceptions, the need is not to build new hospitals but to take over poor, small hospitals and rehabilitate them to give proper service. This should be done regionally rather than by counties. Modern transportation favors this. However, there should be a careful survey by competent people to show a definite need in the regions where these small hospitals exist and to show that the community will be willing and able to support them after they are rehabilitated and the government turns them over, for the cost of rehabiliating or establishing these hospitals is small as compared with the cost from year to year of administering them."

Dr. E. T. Olsen, medical director of State University and Crippled Children's Hospitals, Oklahoma City, Okla., sees one serious stumbling block in the proposed plan. "Maintenance of the hospitals by the community—in this state, anyway," he points out, "would be a serious problem. Several Oklahoma communities have been unable to meet maintenance cost of municipal hospitals and have turned them over to private interests.

"To my mind," he continues, "the subject of adequate medical care for the indigent does not lie in the construction of more hospitals, but rather in the full utilization of all empty beds in existing hospitals with payment for the care of such patients therein by some governmental agency. Any money appropriated by Congress should be largely used for this purpose.

"At the present time a large number of communities are even unable to compensate private or community hospitals for the care of indigent patients for which they are asking these hospitals to provide. Few cities require additional new hospitals, and in such cities where the indigent do not receive adequate care, it is probably due to the fact that the hospitals are unable to provide this care without compensation because they are unable to carry this additional burden and because the city is unable to compensate the hospital adequately, if at all.

"For a number of years practically every community or privately owned hospital in this country has had difficulty in maintaining itself because of lack of income and a reduction of income from endowment funds which would ordinarily be used either for the care of indigent patients or the maintenance of the hospital. It is well known in the hospital field that the imposition of the additional heavy burden of indigent cases and the loss of nominal hospital income during this period has made it necessary for many hospitals to close their doors.

"In most cities or communities financial support to maintain additional new hospitals in a proper manner would not be available. In most smaller towns or communities construction of even small hospitals would impose an additional burden upon the town or community which it could not meet.

"In addition to this problem, the necessary skilled technicians and adequate staff specialists in all the necessary branches of medicine would not be available in the smaller communities. Hospitals alone are of no value. They must be manned by an adequate personnel, trained administrators and technical personnel, and last, but not least, a professional staff competent to provide attention for all classes of cases.

"The largest number of patients in any community could, when necessary, be transferred to a nearby hospital without harm. Those unable to be transferred could be cared for by their local physician or family physician in their home with just as good care as could be furnished by the same physician in a hospital which the community could not adequately support.

"In my opinion, therefore, if money is to be appropriated by Congress for the better care of the indigent sick, it should be allocated for the use of existing hospitals in payment for care of indigent patients at not less than the average per capita diem cost of the hospital."

The situation in Colorado is described briefly in the comment received from Dr. Maurice H. Rees, superintendent of the University of Colorado General Hospital, Denver: "In Colorado we have 100 hospitals

*Reprinted with permission of the publishers of HOSPITAL MANAGEMENT.

"The various disturbances which have been associated with cigarette smoking are as follows: Excess salivation; hoarseness; irritation and 'biting' of the tongue; cough; shortness of breath; burning; palpitation of the heart.

"All these disturbances with the exception of palpitation of the heart are associated with an irritation of the mucous membrane."

Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154

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well distributed. Our need is not for new hospitals but support could be obtained, Colorado would have ample for better support of the existing hospitals. If such hospitalization. There are probably a number of localities in the United States in need of new hospitals,'' he adds, ''but the big problem would be to support such institutions after they are constructed.''

The dangerous part of the plan, in the opinion of Dr. A. J. Hockett, superintendent of Touro Infirmary, New Orleans, is where the government turns over the maintenance of the hospitals to local management. ''Both the medical profession and hospital people agree that the federal government should assist in the construction of hospitals in the poorer states,'' he asserts. ''The matter of turning these institutions over to 'local groups' is the point of danger. The personnel to be appointed and the standards to be required should be clearly defined. This is a matter which is not simple of accomplishment but which is entirely possible if the medical profession and those sponsoring the project work in close harmony with the aid of sound professional advice.''

Dr. A. C. Bachmeyer, dean of the University of Chicago Clinics, raises the point that if local groups cannot participate in the cost of construction, how can they be expected to give assurance that they can maintain and operate the building. ''There is no doubt,'' he writes, ''that there is need for the extension of hospital service in certain areas, but the situation requires very careful study from many angles. The President's announcement indicates that such study will be made. The plan, therefore, merits careful consideration and the cooperation of the various national hospital organizations.''

Skepticism about the proposed policy to turn over the management of the institutions to local groups, is also indicated by Dr. Fred G. Carter, superintendent of St. Luke's Hospital, Cleveland, and president of the American Hospital Association. ''It might be well,'' he says, ''to get the assurances first and attend to the construction afterwards.''

He adds: ''The modesty of the President's program is in strong contrast with the ambitious proposals of the Wagner Health Bill. If enacted into law it will be somewhat in keeping with one of the recommendations of the Joint Conference Committee of the national hospital association which sugegsts that in the implementation of a National Health Program it might be wise first to acquire experience through the utilization of small experimental areas where ideas could be tried out before wider applications are undertaken.

''I like the implication that the need for these hospitals would be determined by those who are qualified to have an opinion regarding such needs. Certainly hospital administrators should have a prominent part in helping to determine these needs.''

The President's proposal was greeted with high praise by Dr. S. S. Goldwater, Commissioner of Hospitals of New York City and former president of the American Hospital Association, who said, according to a recent newspaper interview:

''The President's proposal seems to be the most reasonable approach thus far made to the problem of filling in gaps in the organization of needed medical service.

''The program suggested by the President seems to be well within the means of the government, which could hardly be said of some of the earlier proposals that have come out of Washington.

''The choice of locations for the proposed hospitals presumably will be made by competent committees on the basis of demonstrated need and of local inability to provide required capital.

''The adoption of the policy of entrusting management of the hospitals to the communities which they serve indicates that the President has grasped one of the most vital failings in hospital administration.

''More than thirty years of experience in the administration of both voluntary and government hospitals both as single units and in centrally controlled groups has convinced me of the advantages of administering a hospital from within rather than from without. The more remote the control of appointments and of essential hospital administration and policies, the greater the danger of mischance.

''Hospital administrators recognize the need of regional coordination of neighboring hospital units, but such coordination can best be accomplished by regional councils organizing on a voluntary basis with a minimum of external bureaucratic control.

''The President's proposal should put an end to factional coordination of neighboring hospital units, but such the unreserved support of hospital administrators, public health officers and the practicing profession.''

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Commonwealth Fund Marks Up Completion of 21st Year

At the completion of its twenty-first year, the Commouwealth Fund in its annual report recalls that its work was begun with gifts for war service and relief and that part of its income was devoted to relief and reconstruction for more than ten years. Now all its major objectives are threateued by war; many of its aetivities have been disrupted for the time being.

Gradually changing its emphasis to American health, the Fund has since 1918 appropriated for its main interests more than $13,500,000 to the promotion of physical health; nearly $7,000,000 for mental health, and for fellowships to bring British graduate students to American universities, $3,250,000. Appropriations for the year euded September 30, 1939, amounted to $1,919,908.73, of which about two-thirds was for the promotion of health through medical education, medical research, public health and the rural hospital program.

To aid in the developmeut of public health activities in Oklahoma, Alabama, Tenuessee, Mississippi and Massachusetts, the Fund appropriated $356,619.72. This appropriation also covered fellowships for physicians and nurses to study at Harvard, Tulane and Vanderbilt universities and at Tufts College.

The rural hospital program sponsored by the Fund now includes teu hospitals completed, two in the planning or construction stage and onc not built by the Fund but receiving cooperation. The appropriation for this division, $491,606.67, includes not only construction but fellowships for physicians and hospital personnel, support of a training course for hospital administrators at the University of Chicago aud technical advisory service. Two of the older hospitals in this group arc now so overloaded that plans are being made to enlarge them.

Mental hygiene, a major preoccupation of this foundation from the beginning, claimed an appropriatiou of $193,329. The Fund's method iu this field at preseut is to encourage the interpretation of psychiatry and Clinical medicine, primarily in the practice of pediatrics, through fellowships for graduate training and through establishment of clinical teaching facilities which bring a psychiatric point of view into the pediatric service. The Fund supports the development of psychiatry at the Uuiversity of Louisville and the work of the division on community clinics of the National Committee for Mental Hygiene; a teaching clinie and psychiatric unit for children at the University of Minnesota; a new similar unit at Stanford University School of Medicine, and fellowships at various universities and hospitals.

One of the casualties of the war is in this field. The London Child Guidance Clinic and Training Center, supported by the Fund, has closed for the duration of the war; the Child Guidance Council has moved its headquarters to Bath aud takeu up emergency duties iu addition to its usual program. Fellowships granted to British students to study in the United States have also been iuterrupted in mauy cases and four American students who planned to study abroad have had to postpone the trip or transfer their work elsewhere.

Few new grants for medical research were made, the report stated, the greater part of the funds available for this purpose having beeu pledged previously. The uew ones included fuuds for two ultracentrifuges at Harvard University for the study of protein chemistry; studies of kidney function, chemical factors iu resistance to disease and leukemia.

A. M. G. A. Tourney Set For June 10

The American Medical Golfing Association's Tweuty-Sixth Annual Tournament will be held at Wiuged Foot Golf Club, Mamaroneck, New York, Monday, June 10, 1940, according to an announcement by Bill Burns, secretary. Winged Foot has two famous championship courses and a beautiful clubhouse.

Some 250 out of the 1,360 Fellows of the A. M. G. A. are expected to take part at Winged Foot in the 36-hole competition. Each contestant will play both courses. The hours for teeing off are from 7:00 a. m. to 2:00 p. m.

The sixty prizes, in the nine events, will be distributed after the banquet at the clubhouse at 7:00 p. m.

All members of the American Medical Association are eligible for Fellowship in the A. M. G. A. For registration application write the secretary.

Medical Technologists Will Be Enrolled By Red Cross

At the request of the Surgeon General of the Army and iu compliauce with its policy of cooperation with both the Army and Navy, the American Red Cross, as an expansion of its peace-time service for the military forees, has undertakeu the enrollment of various types of medical technologists who are willing to serve in the medical departmeuts of the Army and Navy if and when their services are required at the time of a national emergency.

Persous with the following qualifications will be eurolled:

Chemical Laboratory Technicians(male)
Dental Hygienists (male and female)
Dental Mechanics (male)
Dietitians (male and female)
Laboratory Technieians (male and female)
Meat and Dairy Hygienists (Inspectors) (male)
Nurses (male) (This group will not be members of the Army or Navy Nurse Corps which under basic law are limited to females, but will be used as technologists for service auxiliary thereto.)

General qualifieations for enrollment are as follows:

1. Citizens of the United States.
2. Ages 21-45 (Army); 18-35 (Navy—men only).
3. Physically qualified. Applicants must pass a satisfactory physical examination, according to standards set respectively by the Army and Navy Medical Departments.
4. Women applicauts must be unmarried.
5. All applicants must express a willinguess to serve as a technologist in time of a national emergency.

Male technologists will be eligible for enlistmeut iu the Army as non-commissioned officers in the grades of sergeant, staff sergeant, or technical sergeant. Womeu technologists, and men who do not qualify physically, will be eligible for employment by the Army as civilians.

For the Navy, male technologists will be eligible for enlistment in the Naval Reserve as Petty Officers — Pharmacist's Mates 3d, 2d, and 1st, Class and Chief Pharmacist's Mate (acting appointment). Women technologists are uot eligible for service in the Navy under present plaus.

The Medical Department of the Army will require a considerable number of technologists in each of the above named groups. The Navy Medieal Department requirements will be similar exeept for dietitians, occupatioual therapy aides, orthopedic mechanics and dairy and food hygienists (inspectors) who will not be needed. Notwithstandiug the maintenauce of this enrollment, the Navy also desires peace-time enlistment in the U. S. Naval Reserve, and male technologists who wish to enlist in the Naval Reserve are urged to communicate direct with the Commandant of the Naval District iu which they reside. The address of their Commandant will be furnished upon request.

Techuologists who qualify according to these general standards and who are willing to enroll for service as outlined above should eommunicate with the American National Red Cross, Washiugton, D. C.

Meeting Places Announced for A. M. A. Annual Session

Locations of meetings at the American Medical Association annual session, scheduled for June 10 to 14 in New York, have been announced by the Journal of the A. M. A. They are as follows:

House of Delegates: The Waldorf-Astoria, Basildon and Jade rooms.

General Scientific Meetings: The Waldorf Astoria, Ballroom, and the Commodore, Grand Ballroom.

Registration and Scientific and Technical Exhibits: Grand Central Palace.

Symposium on Health Education: Hotel Roosevelt, Grand Ballroom.

Women's Auxiliary: Hotel Pennsylvania.

SECTIONS OF THE SCIENTIFIC ASSEMBLY

Practice of Medicine: The Waldorf-Astoria, Ballroom.

Surgery, General and Abdominal: The Commodore, Grand Ballroom.

Obstetrics and Gynecology: The Commodore, Grand Ballroom.

Ophthalmology: Hotel Roosevelt, Grand Ballroom.

Laryngology, Otology and Rhinology: Hotel Roosevelt, Grand Ballroom.

Pediatrics: The Waldorf-Astoria, Ballroom.

Pharmacology and Therapeutics: The Biltmore, Music Room.

Pathology and Physiology: The Biltmore, Music Room.

Nervous and Mental Diseases: The Biltmore, Ballroom.

Dermatology and Syphilology: The Commodore, West Ballroom.

Preventive and Industrial Medicine and Public Health: Hotel Roosevelt, Hendrik Hudson Room.

Urology: The Commodore, West Ballroom.

Orthopedic Surgery: The Biltmore, Ballroom.

Gastro-Enterology and Proctology: Hotel Roosevelt, Hendrik Hudson Room.

Radiology: The Commodore, East Ballroom.

Miscellaneous Topics, Session on Anesthesia: The Commodore, East Ballroom.

Pneumonia And "Flu" May Lose Rank

Pneumonia and its frequent forerunner, influenza, may soon relinquish their rank as second among the causes of death in the United States, due to the effectiveness of serum and sulfapyridine in combating the former disease, Jesse G. M. Bullowa, M.D., New York, points out in *Hygeia, The Health Magazine* for March.

These agents, he asserts, reduce the death rate from pneumonia to one-fourth of what it is when no specific remedy is used.

Although these two remedies are sometimes used together, indications vary for the specific use of each. "In choosing the remedy," Dr. Bullowa explains, "we must bear in mind that serum treatment fortifies and accelerates the natural immunity mechanism, while chemical treatment such as sulfapyridine weakens the invading microbe. In the latter instance, cure ultimately depends on the operation of the body's protective mechanisms." Since the serum used must match exactly the special type of pneumococcus responsible for the disease, it can be used only when pneumococci are found in sufficient numbers to accomplish typing readily. When it is difficult to find sufficient pneumococci, or when the patient is so sensitive to serum that it cannot be used safely, sulfapyridine may be substituted. However, it must be used with great care, as there may be

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unfavorable effects from its use, such as nausea and vomiting or measles-like eruptions.

"Because physicians now comprehend the nature of the problem of combating pneumonia, they are not using many remedies formerly employed," Dr. Bullowa says. "Faith has been lost in the value of whisky for pneumonia. Patients are no longer routinely purged and bled and subjected to stifling atmospheres or poultices. Highly important is the earlier and more intelligent use of oxygen."

Explaining the relationship between influenza and pneumonia, he states: "Influenza and the common cold, both virus diseases, prepare the way for the bacterial infection of pneumonia. These viruses cause congestion and inflammation of the mucous membranes of the nose and lower respiratory passages so that they are prepared for the reception of microbes. As a result of the inflammation, there is an increased amount of mucus which may trap the microbes and keep them in contact with the tissues so that they cause disease.

"For those who must, in the nature of our social life, live with the ever present hazard of meeting virus and bacteria in carriers or patients suffering from influenzas and pneumonias before they take to bed, a practical measure for avoiding infection is to maintain their bodies in the best possible nutrition and avoid such influences as lowered resistance, exposure, fatigue, hunger and alcoholic excess. If we do become infected, we should avoid contacts and should rest in bed."

In a discussion of the comparative value of serum and sulfapyridine in the treatment of pneumonia, an editorial in *The Journal of the American Medical Association* for February 24 says:

"In view of the almost equally enthusiastic reports regarding these new agents for treatment, the physician is confronted with the problem of choosing the one or the other or the combination of the two. Studies relative to their compartive effectiveness have thus far been few. Maxwell Finland, M.D., Boston, and his co-workers report a mortality rate of 13 per cent in 167 cases treated with the specifie serum alone. The death rate in ninety-five cases treated with sulfaypridine alone was 15 per cent. A group of eighty patients was chosen for combined treatment with sulfapyridine and serum. This group contained a greater proportion of older patients and the incidence of bacteria in the blood was about twice that in the cases treated with serum alone and three times that in the cases treated with sulfapyridine alone. The mortality in this group was only 22 per cent. In similar cases treated without specific serums or drugs the expected fatality rate is between 75 and 90 per cent; with specific serums alone it is from 50 to 60 per cent.

"When serum alone is administered, fever disappears after six to twenty-four hours in the great majority of cases, whereas sulfapyridine must be continued for a minimum of forty-eight to seventy-two hours or even longer after fever disappears. Finland feels that sulfapyridine may be started in nearly all cases as soon as the diagnosis of pneumonia is established. He further feels that the drug, at least for the time being, should not be given to patients with jaundice or known or suspected liver or kidney disease. He would give specifie serums as soon as possible to patients over 40 years of age and to all pregnant or reeently delivered women in whom any of the common types of pneumococci are found, and in all eases in which the blood eultures yield specific types of pneumococci. He concludes that in eases of severe involvement the use of the eombination of the drug and specifie serum has shown definite effects in reducing the fatality in the group in which the mortality is the highest.

"H. F. Dowling, M.D., and T. J. Abernethy, M.D., Washington, D. C., present a careful elinical study undertaken to estimate the relative value of the two agents. In a group of ninety eases serum alone was administered and in a group of 130 sulfapyridine alone. The two groups were about similar in severity and were treated at the same time. The total mortality rate for the serum treated group was 16.7 per cent, while that for the sulfapyridine treated group was 11 per cent. The mortality rate among the patients to whom the serum was administered during the first four days was 10.8 per cent. The mortality rate among thirty-four patients receiving sulfapyridine during the first four days was less than 3 per cent.

"Sulfapyridine seemed to be more effective for older patients and for patients with involvement of two or more lobes of the lungs, while the two agents seemed to be of equal value in cases of bacteria in the blood."

In reference to the development of rabbit serum the editorial points out:

"The development of the rabbit serum represents progress since it makes possible, as pointed out by Finland, treatment of patients who are specifically sensitive to horse serum, particularly those who have previously received injections of horse serum. This applies particularly to type XIV pneumonia, in which horse serum has been known to give rise to severe and even fatal reactions. The anti-pneumococeus type XIV rabbit serum does not possess this property."

Dust Inhalation Causes Little Harm

The inhalation of most types of dust, aside from silica and asbestos, causes little irritation and no significant harmful effects, Leroy U. Gardner, M.D., Saranac Lake, N. Y., points out in *The Journal of the American Medical Association* in a discussion of the lung reactions to inhaled dust, particularly among industrial workers.

While silica and asbestos dusts actually cause harmful structural changes by hardening the lung tissue, other mineral dusts, such as coal or iron, by themselves cause no significant hardening but merely pigmentation, which has no influence on the function of the lungs. When they are mixed with free silica there may be a degree of hardening, but it is due to the contaminating silica.

The protective mechanisms of the nose and windpipe, Dr. Gardner says, probably remove at least half of the foreign matter in inhaled air.

The term "pneumoconiosis," which properly refers to all lung reactions to the inhalation of dust, whether dangerous or harmless, has been widely used to connote harmful effects.

"Under the impetus of compensation laws this group of conditions has received so much attention that today pneumoconiosis is almost a household word," Dr. Gardner declares. "But too few are aware of its original significance." The benign or harmless type of pneumoconiosis, he points out, includes "every known reaction to mineral dust except that to the soluble poisons such as lead, the specific diseases, silicosis and asbestosis and 'x-ray conditions' of persons inhaling the dust of barium sulfate (which is used in taking x-ray pictures) and the false nodule-like formation in the lungs of arc welders.

"Most of the dusts in this category exert no appreciable effects on connective tissues of the lungs; a few can produce low grade chronic inflammation which is not progressive and does not terminate in hardening of tissues. These reactions are too restricted in extent, to have functional significant. Even in extreme cases presenting diffuse pigmentation, the lung is still elastic and the respiratory membranes, show no abnormality. If symptoms are associated with such reactions they are in all probability due to causes outside the lungs.

"As far as can be learned from statistical and experimental evidence, the dust other than free silica are not responsible for aleration of natural suseeptibility to tuberculosis or other types of infection. In some of the dusty trades, investigation is disclosing that other factors than the dust are responsible for lung infection."

Discussing the harmful effects of inhaling silica, Dr.

"Hold thou the good; define it well . . ."

—TENNYSON

FOR OVER thirty years Pyramidon has been extensively employed in the management of a variety of painful conditions associated with damaging infections. The results in acute rheumatic infection have been especially gratifying, as is strikingly reemphasized by Drs. B. R. Heninger and G. McHardy[1] in a report on this subject.

In a number of previous publications,[2] symptomatic treatment of acute rheumatism with Pyramidon was also commended. As has been shown by numerous observations there is a rapid subsidence of fever, lowering of pulse rate, relief of pain, and lessening of exudation. Even in the presence of cardiac complications the patient is rendered much more comfortable. Gastro-intestinal disturbances are notably absent. Furthermore, systemic tolerance is usually excellent.

However, in the treatment of patients over a long period, if symptoms of intolerance occur and if the customary repeated blood examinations show an abnormally low leukocyte count, the administration of Pyramidon should be immediately discontinued since granulocytopenia has been occasionally observed, especially in cases of idiosyncrasy.

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[1] Heninger, B. R., and McHardy, G.: *South. Med. Jour.*, 31:1056, Oct., 1938.
[2] Bodenstab, R.: *Deutsches Arch. f. klin. Med.*, 159:171, 1928.
Schottmüller, H.: *Münch. med. Wchnschr.*, 76:502, 1929.
Schultz, M. P.: *Arch. Int. Med.*, 48:1138, Dec., 1931.

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Gardner says that a nodule forms which is composed of connective tissue of the lungs whose fibers are modified by the effect of the silica. During the stage when the nodules are visible by x-ray there is a definite increase in the susceptibility to tuberculosis.

"The infection," the author says, "may develop as a result of reactivation of a preexisting latent tuberculous focus, but opinion today is unanimous that new infections from without are a more common cause. A contact with the tubercle bacillus, which in normal subjects would perhaps be quite harmless, is apt, in the silicotic lung, to result in chronic progressive infection."

Regarding the probable effect that silicosis may have on disease of the heart or cancer of the lung, it is the author's opinion that it has little, if any, influence.

While the effects of asbestos are less extensive than those of silica, Dr. Gardner points out that such symptoms as an irritative cough, difficult and labored breathing, weakness and chest pains may occur. A dusky color of the skin, clubbed fingers and blood streaked sputum are symptoms of advanced disease. On the basis of mechanical injury there should be no progression after exposure to asbestos is discontinued.

Susceptibility to lung infection in asbestosis is not nearly as well defined as in the case of silicosis. Although surveys show contradictory incidences and relationships, the author concludes that "tuberculosis may be an unusually frequent cause of death in certain groups of asbestos workers, but at present it seems more probable that nonspecific hygienic factors and general living conditions are responsible."

Should Cod Liver Oil Be Flavored?

It is a well-known fact that young infants shy at aromatics. Older patients often tire of flavored medications to the point where the flavoring itself becomes repellant. This is particularly true if the flavoring is of a volatile nature or "repeats" hours after being ingested. Physicians have frequently used the terms "fresh," "natural," "sweet," and "nutlike" in commenting upon the fine flavor of Mead's Cod Liver Oil. They find that most patients prefer an unflavored oil when it is as pure as Mead's.

Physicians who look with disfavor upon self-medication by laymen are interested to know that Mead's is one Cod Liver Oil that is not advertised to the public and that carries no dosage directions on carton, bottle or circular. Mead Johnson and Company, Evansville, Indiana, U. S. A., will be glad to send samples and literature to physicians only.

Internal Medicine Exams Scheduled

The American Board of Internal Medicine will conduct oral examinations just previous to the meeting of the American College of Physicians in Cleveland and just in advance of the American Medical Association in New York City.

Applicants who have successfully passed the written examination and plan to take the oral examination in 1940, should advise the office of the Secretary at least six weeks in advance of the examination they desire to take.

The next written examination for 1940 will be given on October 21. Applications for this examination must be filed in the Secretary's office by September 1.

Application forms may be obtained from Dr. William S. Middleton, Secretary-Treasurer, 1301 University Avenue, Madison, Wisconsin.

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ABSTRACTS : REVIEWS : COMMENTS and CORRESPONDENCE

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments From
LeRoy Long Clinic
714 Medical Arts Building, Oklahoma City

"Appendicitis In The Aged." By Edwin M. Miller. Surgical Clinics of North America. February, 1940, Page 103.

The mortality rate in this class of people is still far too high. The author suggests the following considerations which may contribute this high mortality:—

In the *first* place, elderly people are very apt to seek medical advice very late, often too late. They often live alone and do not wish to bother anybody about their complaint. They have fixed notions about what ails them and what should be done about it. They have favorite remedies for everything. They do not fancy taking advice and are often prejudiced against operation. It is therefore not difficult to understand how a case of appendicitis in an old man or woman might progress to an advanced stage before it is seen by a surgeon.

Secondly, the very fact that appendicitis in elderly people is rather rare may in itself be the reason for its not being thought of at all by the family, and perhaps overlooked entirely even by the most conscientious physician. Granting that the normal changes in the appendix make appendicitis less likely in the aged, it is to be distinctly remembered that these normal changes in structure do by no means preclude the possibility of trouble, for as long as there remains any epithelium in the lining of this narrow tube there is always a chance that an acute infection may develop.

Thirdly, the clinical picture of appendicitis in elderly people is very often quite atypical, and for this reason may be difficult to recognize even though seen early. People of advanced years ordinarily do not promptly and characteristically react to an infection of this kind, and there may be exhibited very few general constitutional symptoms. The initial epigastric discomfort is rarely complained of, and while nausea is fairly constant, vomiting until very late may be conspicuous by its absence. Too often the case may present itself such atypical form that it may go on to the point of actual perforation before its presence is definitely suspected.

Fourthly, in making the diagnosis of appendicitis in an elderly person, so many other things must be thought of that it is difficult or even impossible in certain instances to be certain. More or less the same thing is true in children and in middle life but with the person of advanced years the possibilities are greatly increased. There are usually many types of chronic pathology present which, in a measure, may simulate those of appendicitis, or by overshadowing them may cause a consideration of appendicitis to be overlooked. Among these things one may enumerate arteriosclerosis, rheumatism, myocardial change, kidney tronble, or bronchitis, cystitis, diverticulitis, and perhaps an old standing hernia. Each of these, or a combination of them, can easily give rise to some degree of discomfort in the abdomen and make confusing a diagnosis of appendicitis.

In the *fifth* place, the subsequent course of events after the appendix has perforated may be quite unlike that usually seen in younger patients. During the past few years, careful clinical studies of large series of cases, both in children and young adults, have clearly shown that the average so-called "appendiceal abscess," if watched closely and treated conservatively, will in most instances gradually become smaller and spontaneously disappear, and that only a small percentage of them will demand open surgical drainage. In elderly patients, however, who too often present themselves during this advanced stage in the process, not only may there be difficulty in the recognition of the "appendiceal abscess" as such (because of the similarity of its clinical manifestations with other pathology), but also there may be grave danger in following a watchful waiting policy. The reasons for this probably lie in the fact that the localized area of peritonitis close to the perforation in the appendix does not become as thoroughly walled off as it does in young people, and therefore there is more likelihood of its spontaneous spread into the general peritoneal cavity.

In the *sixth* place, perforation of the appendix with rapid spread of the infection into the general peritoneal cavity, in a young person, is by no means necessarily fatal. Ample statistical evidence has shown that early surgical interference with removal of the ruptured appendix and the establishment of adequate drainage will be successful in more than 75 per cent of cases. With an elderly person, however, the prognosis is entirely different, for a situation of this kind, even in the best of hands, is not well tolerated, and most times leads to a fatal result. This is due to the diminished resistance to a generalized peritoneal infection, the almost invariable aspiration pneumonia, and the frequency of other serious complications.

Every surgeon should give particular consideration to the problem of appendicitis in the aged, being at all times mindful of their peculiarities, especially their tendency to minimize their complaints and their aversion to taking advice. We should not forget that an old person may have appendicitis when we are confronted with a puzzling clinical abdominal picture. We should not delay, if the evidence warrants, in advising surgery and in adopting every means to prevent the development of complications.

LeRoy D. Long.

"The Control of Hemorrhagic Tendencies." By Waltman Walters. Surgery, Gynecology and Obstetrics, February 15, 1940, Volume 70, Page 308.

A discussion of hemorrhagic tendencies of surgical patients might be grouped as follows: (1) bleeding from lesions of the gastro-intestinal tract; (2) tendency to bleed exhibited by patients who have lesions of the bilary tract and jaundice; and (3) tendency to bleed exhibited by patients who have certain blood dyscrasias, such as purpura haemorrhagica, hemophilia, and pseudohemophilia.

The most frequent cause of gastro-intestinal bleeding is an ulcer of the posterior duodenal wall which perforates into the pancreas and erodes one of the branches of the gastro-duodenal artery. Approximately two-thirds of the patients who have duodenal ulcer do not have hemorrhages as a result of it. If, therefore, one were to include this larger series of cases in a study undertaken to determine the incidence it would appear to be rather low. On the other hand, if one were to study the incidence of fatal hemorrhage among the 33 per cent of patients who do bleed, the incidence would be found to be much higher, varying from 14 per cent (Holman)

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to 40 per cent (Fiusterer). The corollary of this is that the condition of the patient who has an acutely bleeding duodenal ulcer should be regarded as a surgical emergency and should be treated accordingly; wheu necessary the hemorrhage should be controlled by opening the duodenum aud suture-ligating the gastro-duodenal artery, provided the condition of the patient permits.

Bleeding tumors of the stomach and colon, both benign and malignant, may cause continuous bleeding without gastro-intestinal symptoms. The presence of the anemia and its associated symptoms of weakness, dizziness, and faintness may be the only symptoms preseut.

Intestinal bleeding may occur as the result of an ulcer or a tumor of a Meckel's diverticulum.

It has been shown that there is a definite relationship between the concentration of prothrombin in the blood and the hemorrhagic tendency of jaundiced patients. The hemorrhagic tendency is the result of exclusion of bile acids from the intestinal tract and the absence of a hypothetical fat-soluble vitamin described as "the coagulation vitamin" or "vitamin K." In the presence of such a tendency the prothrombin clotting time of the blood may be prolonged. By meaus of the oral administration of bile salts and vitamin K, a decrease in the prothrombin clotting time of the blood is obtained and bleeding ceases if it has been preseut. Almquist and Klose receutly reported that phthiocol, a naphthoquinone, presented physical and chemical properties similar to those of pure vitamin K. Butt, Snell, and Osterberg recently reported the clinical results obtained in the treatment with phthiocol of 10 patients exhibiting hypoprothrombinemia. Each of the patients was thereby afforded a decrease in the elevated prothrombin time. Nine of the patients did not bleed, and one patient who had been bleeding ceased to bleed. Phthiocol can be administered intravenously by using 50 milligrams in 250 cubic centimeters of sterile physiological saline solution.

Bleeding from esophageal varices secondary to cirrhosis of the liver is suddeu in ou-set and frequently occurs without premonitory symptoms. Immediate transfusions of blood, and later, ligation of the left coronary vein and possibly splenectomy, have produced satisfactory results in several instances, particularly those in which cirrhosis of the liver has been a part of Banti's disease.

Although hemophilia and pseudohemophilia occur infrequently, the latter may be unsuspected until bleeding from operated regions calls attentiou to the blood dyscrasia.

Cell free, normal plasma contains a substauce which will shorten the coagulation time of the blood of patients who have hemophilia and this knowledge has been used successfully to stop the bleeding of such patients. Globulin cau be precipitated from normal plasma which is equally as effective in controlling hemorrhage as cell free, normal plasma.

Purpura haemorrhagica, or essential thrombocytopenia, is characterized by hemorrhagic phenomena and by a marked reduction in the number of platelets in the blood, the surgical treatment of which consists in the removal of the spleen. This procedure should be done in the interval between hemorrhagic episodes.

Although aplastic anemia and acute leucemia are diseases in which the hemorrhagic tendency plays a role, their occurrence is infrequent among surgical patients. Treatment consists of the palliative administration of blood.

LeRoy D. Long.

"Experimental Goiter Due To Calcium." By C. Alexander Hellwig, M.D. Department of Pathology, St. Francis Hospital, Wichita, Kansas. Archives of Surgery, Volume 40, Number 1, January 1940, Page 98.

The principal thesis of the author is that endemic goiter is not a deficiency disease due mainly to lack of iodine in food and drinking water, aud he believes that his experiments and those of other workers have demonstrated that there are "positive goitrogenic factors" of importance.

He refers to the experiments of Webster, Clawson, and Chesney who showed that "feediug cabbage to rabbits causes goiter in a short time," and he believes that these experiments "proved that a dietary factor much more powerful than any iodine deficiency may be respousible for goiter."

He makes the statement, "During the last few years, another positive goitrogenic agent has been demonstrated. Using lime, calcium chloride or calcium carbonate in conjunction with a diet low in iodine, Tanabe, Hellwig, Thompson and Hibbard produced goiters in white rats."

On the other side of the question, the author was not able to produce hyperplasia of the thyroid by lack of iodine alone. These experiments were made from 1929 to 1932. This coufirms, in his opinion, the contention, that there was at least another goitrogenic agent of a positive character, and he believes that experiments by himself and others have demonstrated that the agent is lime administered to the animal in some form—either lime, calcium chloride, or calcium carbonate. It appears that his conclusion was supported by Hibbard in experiments in a nonendemic region.

He refers to a recent paper by Kenyou who indicated that Remington and Levine, Krauss and Monroe and Hayden, Wenner and Rucker had reported hyperplasia of the thyroid iu white rats on a diet deficient in iodine. The author answers this criticism by making the statement that, "An analysis of the goitrogenic diets used by these authors reveals, however, that they contaiued, without exception, an abundance of calcium."

Since the beginning of the experiments by the author, Hibbard, Thompson and Stiner have brought forward additional questions. Hibbard reported that hyperplasia of the thyroid was produced by feeding the animal calcium chloride, but that calcium lactate was without effect. This led Hibbard to conclude that the chlorine ion, rather than the calcium ion was responsible for the development of goiter. Thompson reported that thyroids of rats fed a goitrogenic diet for longer than three months underwent secondary atrophy, and, later, Stiner expressed the opinion that the lack of vitamius was au important factor in the etiology of goiter.

In view of the objections raised by Kenyou, the author repeated his experiments under most ideal and exacting conditions, beginning September 12, 1938, the subjects of the experiments being 40 male white rats 16 weeks of age, and of approximately the same weight. "The experimental diet for each animal consisted of yellow corn meal, rolled oats, calcium carbonate, sodium chloride and tomato juice. Ten animals received this diet with pure drinking water. Thirty animals were given the same food, but as drinking water they were given a 2 to 10,000,000 solution of potassium iodide."

Histological examination showed that there were hyperplastic enlargements of the thyroid to a striking degree in all the rats. In the rats not given iodine in any form there were diffuse parenchymatous goiters, while in the case of the rats fed infinitesimal doses of potassium iodide there were diffuse colloid goiters. In none of the rats was there a reduction of the size of the thyroid.

It appears that the experiments of Hellwig demonstrated two things particularly: First, that calcium carbonate is as effective in producing hyperplasia of the thyroid as calcium chloride; second, that prolonged experimental feeding was not followed by a reduction in the size of the thyroid. They seem to establish two other facts: First, since all the experimental auimals in this series were fed calcium carbonate, it appears that the dictum of Hibbard that the chlorine ion rather than the calcium ion was responsible for the development of endemic goiter is altogether erroneous; second, it appears that animals fed on calcium preparations developed goiter of some form, regardless of whether

they had been fed, at the same time, food containing vitamins.

Comments.—This report by Dr. Hellwig is very obviously of tremendous importance. One could almost appropriately say that it supplies the "missing link" in connection with the development of endemic goiter.

At the same time, careful scrutiny of the report does not show that the lack of iodine is without importance in connection with development of goiter. Indeed, the exact opposite is true because his report shows that the experimental animals not protected by iodine developed diffuse *parenchymatous* goiter, while those protected by the ingestion of infinitesimal amounts of iodine in the form of potassium iodide developed diffuse *colloid* goiter. This view of the question does not indicate at all that the reporter is taking issue with the author because he, himself, says in his final conclusion, "The amount of iodine required to prevent goiter is variable and depends on the presence and intensity of positive goitrogenic agents."

LeRoy Long, Sr.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
911 Medical Arts Building, Tulsa

"Salzmann's Nodular Corneal Dystrophy." Everett B. Muir, M.D. Salt Lake City, Utah. The American Journal of Ophthalmology, February, 1940.

After a brief historical survey of this rare condition a case is reported of a white male, age 54 years. He had been unable to do more than distinguish lights since childhood. Over the right eye were grayish-white elevated nodes on the cornea, irregular in size and shape. The slit-lamp showed involvement of Bowman's membrane. The left cornea had a large leucoma in the upper part with small nodes lower down on the cornea. Vision in the right eye was 9/200 and improved to 20/70 with correction. The procedure used by former essayists was used, i. e. the superficial layers of the large leucoma and all of the small nodes were peeled from the cornea with a sharp plastic knife. Three days later epithelization was complete with little intervening discomfort. Atropine and cod liver oil ointment was used postoperatively. Six weeks later when the operation had definitely showed good results on the left eye, then the right eye was operated in a similar manner. It required ten days for healing to take place in this eye as the reaction was much greater. Vision was definitely improved.

According to the history obtained and the miscroscopic findings, the occurrence of the largest lesion on the left eye took place nearly fifty years before the smaller nodes on the right. There was a possibility that phlyctenular keratitis might have been an etiological factor in the left eye but not in the right. There are numerous sections of the lesion reproduced both under high and low power.

"Pathogenic Staphylococci, Their Incidence in the Nose and Throat and on the Skin." E. H. Gillespie, M.D., E. A. Devenish, M.D., S. T. Cowan, M.D. The Lancet, October 21, 1939.

A septic infection in operation wounds caused an investigation by Devenish and Miles, who found that three of the four surgeons tested were nasal carriers of Staphylococcus aureus. One of the three was a persistent skin carrier of the same strain as found in the nose. Since there is not any record of any survey of the incidence of staphylococci both in the nose and on the skin identified as potentially pathogenic, the authors undertook such an investigation.

From a test of 159 students for potentially pathogenic Staphylococcus pyogenes, in which serological typing was used to establish the relationship between various strains, the following conclusions were drawn.

(1) The nasal-carrier-rate was 43.4 per cent and the skin-carrier-rate 19.5 per cent. The double-carrier-rate was 12.6 per cent.

(2) The skin-carrier state depended on the nasal carrier state, which in turn was associated with a history of chronic nasal disease.

(3) The infestation of the skin of the hands may be relatively deep-seated, for five of thirteen double carriers excreted Staphylococcus pyogenes into rubber gloves after routine surgical disinfection of the hands.

"Exophthalmos, Without Pulsation, Due To Arteriovenous Aneurysm." Stirling S. McNair, M.D., Jackson, Miss., Archives of Ophthalmology, January, 1940.

"Exophthalmos—is an interesting condition for two reasons, namely, the great variety of lesions which produce it and the serious consequences it may cause to sight or life." A simple easy method is given for the determination of the presence or absence of exophthalmos.

This is a case report of a woman, age 65, whose chief complaint on admittance to the hospital was a slight headache, a buzzing sensation in the left orbital region and throbbing pain and rapid loss of vision. Her past history and physical examination were essentially negative except for an auricular fibrillation and a blood pressure of 190-108. W.B.C. 13,100. The history, examination and progress from day to day are given in detail. This is followed by a review of the literature on the subject with a differential diagnosis, which is quite difficult to make.

The author's conclusions are: A rapidly developing pulsating exophthalmos, a bruit which is usually heard best over the orbital and temporal regions and rapidly failing vision, often resulting in complete blindness, are the cardinal signs of an aneurysm between the internal carotid artery and the cavernous sinus. In the case reported here all of the cardinal signs were present except pulsation, which is rarely absent in an aneurysm of the internal carotid artery and the cavernous sinus.

The condition in this case was severe, as evidence by an extreme degree of exophthalmos, complete external ophthalmoplegia, acute glaucoma, an ulcer of the cornea, complete peripheral paralysis of the facial nerve and complete blindness.

As to treatment in these cases, I believe ligation of the common carotid artery of the affected side, with subsequent ligation of several branches of the external carotid artery of the same side if necessary, to be the safest and most satisfactory form of treatment.

"Episcleritis and Interstital Keratitis From Hypothyroidism." James B. Stanford, M.D., Memphis, Tennessee, Southern Medical Journal, January, 1940.

The author here simply reports the results obtained in nine cases. These had been treated over varying periods of time in the routine methods, unsuccessfully. Tests showed a more than normal minus metabolism in all cases. Some of these patients did not have a very low metabolic rate but the author advances the theory that probably the individual might function better at a higher metabolic rate even though the reading might be considered normal for that particular person. He also states that dysfunction other than thyroid might enter into the picture but that at present this is almost impossible to determine. About the only change in treatment that had been used on these nine patients was the addition of thyroid extract three times daily. An intramuscular injection of bismuth was used on one patient in addition to the thyroid. In a matter of a week or ten days, all patients showed a marked improvement, if not apparently entirely well. These reports were thought worthy of mention in view of the fact that this condition is rather unsatisfactory so many times to treat quickly and successfully.

THREE ORGANIC DISEASES INFLUENCING TREATMENT

There are three organic diseases which interfere with the coronary circulation and which must be remembered in planning a course of treatment in angina of effort. These are coronary thrombosis manifested by angina of effort, angina of effort due to syphilitic aortitis, and angina of effort due to anaemia, whether pernicious or microcytic. Where angina of effort follows directly after a coronary thrombosis there is a very good chance of its disappearing completely during the subsequent 12 months or so. In the case of syphilitic aoritis manifesting itself by angina of effort the cardiac pain can often be cured by thorough antisyphilitic treatment. When angina of effort is due to anaemia, the pain nearly always completely disappears with the improvement of the blood count.''

INTERNAL MEDICINE

Edited by Hugh Jeter, M. D., F. A. C. P., A. S. C. P.
1200 North Walker, Oklahoma City

"Observations on Human Beings With Cancer, Maintained at Reduced Temperatures of 75-90 Degrees Fahrenheit." Lawrence W. Smith and Temple Fay, Temple University School of Medicine, Philadelphia, Pennsylvania, American Journal of Clinical Pathology, January 1940, Vol. 10, No. 1.

This paper deals primarily with the effects of prolonged low temperatures upon the physiological functions of patients with hopeless cancer. Regressive changes, such as nuclear destruction and cystoplasmic disintegration, take place in young embryonal cells, particularly in neoplasms, the authors believe as a result of reduced physiological activity interfering with metabolism of these cells.

These studies have brought out the fact that patients can be maintained over periods of five to eight days at temperature levels between 85 and 90 degrees F. Low temperatures were found to be very successful in the control of the pain of the terminal stages of cancer. A small anesthetic dose of ''Evipal'' was given each patient to overcome the initial discomfort of a falling body temperature.

The specific physiological effects of prolonged low temperatures which were noted as preliminary observations included: Slight anemia, leukocytosis, hemoconcentration, increased rate of circulation in peripheral vessels, increased viscosity of the blood, reduction in blood chlorides, slight hypoglycemia and reduced basal metabolic rate. Renal function is maintained without kidney damage.

Comment: This article should clarify many of the questions which have come to the minds of clinicians since the last meeting of the American Medical Association, when the authors demonstrated by scientific exhibit the nature of their experiment. It is now clearly understood that their investigation was entirely experimental and particularly directed toward the effects of reduced temperature upon embryonal cell growth and activity. Chick embryos, various forms of plant life and tissue cultures, as well as a hopeless case of cancer, were studied. The side-effects, such as the observation of the blood, renal function, blood chemistry and basal metabolic rate, are herein reported and extremely interesting.

UROLOGY

Edited by D. W. Branham, M. D.
502 Medical Arts Building, Oklahoma City

"Bilateral Renal Tuberculosis." A Unique Case. Alexander Randall. Journal of Urology, January, 1940.

Dr. Randall has reported in detail the unusual history of a male patient who has had bilateral renal tuberculosis for thirty-seven years. His present age is 55, the patient today weighs 190 pounds and has every appearance of perfect physical health; bladder symptoms are negligible but at intervals of two to three months the passage of renal calculi will cause fever, pain and hematuria.

In his comment on the case, he remarks that it is not only a unique story, but it is a lesson in counterbalance which enters other urologic problems, and may be of value in expressing a prognosis in bilateral reual disease. In this particular instance he feels that we can observe nature's compensatory efforts to carry on vital function where both orgaus are equally involved, for it has been impossible for either organ to shift its burden and functional responsibility to an uninvolved mate.

"Conservative Surgery in Management of Hydronephrosis." E. Halsell Fite. Journal of Urology, January, 1940.

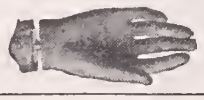
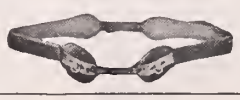
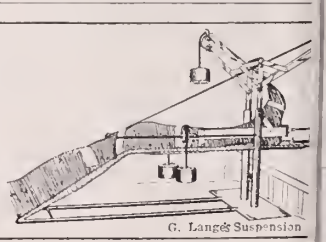
Four cases are presented which illustrate the value of conservative surgical procedure in the treatment of hydronephrosis due to obstructive factors. In one instance an aberrant vessel was removed with apparent symptomatic relief and gradual return of the kidney to normal. Another was the reimplanting of a ureter which was cut in order to remove the obstruction produced by an aberrant vessel.

The third case was that of an elderly patient in whom previous attacks of obstructive colic proved by investigation to be due to a congenitally high insertion of a ureter in conjunction with an obstructing aberraut vessel. The sac was resected and the nreter reimplanted at the most dependent portion of the sac. Subsequent examination proved the therapeutic value of such procedure, in the relief of her symptoms and return to normal of the hydronephrotic kidney. The last case was that of a child in whom a congenital stricture of the ureter was removed and the ureter reimplanted in the kidney. A successful result was obtained.

Comment: To the conscientious urologist, nothing gives so much satisfaction as the knowledge that through a surgical procedure the functional capacity of a kidney, doomed to ultimate destruction, is prolonged. Only through a complete diagnosis followed by a carefully planned surgical attack can such be obtained.

In most of these cases success is less often observed than failure, but this should be no deterrent because after all, to perform a nephrectomy is much like the amputation of an extremity; it is a confession of failure in treatment. One successful restorative operation performed to save a dying kidney more than compensates for a dozen surgical attempts followed by failure.

Presentations such as this keep in mind the fact that in selected cases, conservative operative procedures are of utmost value.


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THE JOURNAL
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VOLUME XXXIII OKLAHOMA CITY, OKLAHOMA, APRIL, 1940 NUMBER 4

Traumatic Affections of the Nose*

GEORGE H. KIMBALL, M.D., F.A.C.S.
N. ROBERT DRUMMOND, M.D.
OKLAHOMA CITY, OKLAHOMA

Injuries of the nose may be either to the soft tissue, to the bony and cartilaginous framework, or to a combination of both. Herewith is a brief discussion of these injuries and their management.

EXAMINATION OF THE INJURED NOSE

The examination of the nose should be, first, to establish the extent of any damage to the soft tissue covering the nose. This may be done by a careful cleaning away of blood and close inspection of any lacerations or contusions. During this process care should be used to determine whether or not the continuity of the entire framework is altered. Bony fractures can usually be discovered by malalignment; and sometimes crepitation. Cartilaginous displacement is usually recognized by sight except in extreme swelling. The patency of the airways must be investigated. This is accomplished by cleaning the nose with a swab of hydrogen peroxide and visualization with a long bladed speculum. X-ray is of some value but is usually unnecessary for an accurate diagnosis. In any injury of the nose the other structures of the face as well as the rest of the body should receive due attention so that no injury will escape so far as one is able to determine.

SOFT TISSUE INJURIES

Injuries of the soft tissue may be contusions, abrasions, lacerations or a loss of a part of the covering structures. Contusions should be treated as those elsewhere in the body. After thoroughly establishing the continuity of the framework, these may be treated by cold packs for several hours followed by hot applications. Later if a hematoma is formed that does not absorb, this may be aspirated and a mild pressure dressing applied provided there is no active infection present. Abrasions should be cleansed of any foreign material. If these contain road oil or dirt that is not readily removed, the patient should be given an anesthetic and the foreign material removed by vigorous scrubbing to avoid tattoo. The lesion is then dressed with a grease gauze and allowed to epithelize.

Lacerations require cleaning, trimming of devitalized tissue and accurate approximation of the wound margins with a non-absorbable suture. The after care is that of keeping the wound clean and removal of sutures as soon as practical, that is within forty-eight to seventy-two hours.

Injuries which result in loss of tissue present a much more difficult problem. The question arises as to when the replacement should be done. If the area is clean and the loss is that of skin without deeper structures, after careful hemostasis, a thick split graft will probably give the best result. In complete severance of the tip of the nose if the severed portion is kept clean and moist, we find that in most instances it can be sutured into position within a few hours after the injury and will remain viable. The tip should be sutured accurately without dead space and afterwards should be kept in a moist, warm, but not hot, dressing. This assumes that the general condition of the patient will permit the procedure. Dry heat in this instance is extremely detrimental. In case of larger losses where the addition of

*Read before the Surgical Staff of University Hospital; January 18, 1940.



Fig. 1.—Loss of tip of nose replaced by a tubed pedicle from the neck.

subcutaneous tissue is necessary the area should be cleaned and dressed with a moist saline dressing until a plan of repair can be evolved. A temporary split graft often serves as a covering until the more extensive surgery can be completed. (See Fig. 1). (Group 1).

Compound Fractures

Compound fractures of the nose are usually mutilating unless adequate care is rendered. Residual scars and deformity may even then ensue. Such injuries may or may not result in the loss of tissue. If there is no loss of substance, the wound should be cleaned under general anesthesia, if the patient's condition permits, and the soft tissues carefully sutured into their original position. Following this the framework is to be reconstructed as later described. (See Fig 2). Fragments of bone and cartilage should not be removed unless entirely detached. If these injuries result in loss of substance, they should be dealt with as described above in connection with soft tissue injuries. If the loss is extensive, soft tissue reconstruction should be as complete as possible with the view of later transporting tissue from other portions of the body. Bony losses should receive later attention. (Group 2).

Simple Fractures

In the simple fractures, there is usually nose bleed which in most instances will be controlled by rest and digital pressure. If the patient's condition permits, he should be anesthetized either by general or local anesthesia. We feel that intravenous anesthesia is ideal for this work. The bridge of the nose is gently elevated by a strong, straight instrument, as a male sound or large hemostat, and with the free hand the arch is moulded into position. This is usually a narrowing and straightening process. In many cases fixation is unnecessary but in the case of comminution a stainless steel wire, 30 to 32 gauge, may be mattressed through the bridge and large lead plates used for fixation. In the more severe cases an internal splint may be needed, fixed either to the teeth or a plaster head cap. Packing is to be avoided but may be necessary to control hemorrhage or to act as a mild internal splint for 24 to 48 hours. The septum is straightened by the blades of a long speculum or the elevating instrument. The lead plates used for fixation may be removed at the end of the two weeks in most cases.

Old Traumatic Deformities

Old traumatic deformities may present any variety of deformity from a disturbance



Fig. 2.—Compound fracture of nose repaired by cleansing, suturing, and reduction of the fracture. No fixation.



Fig. 3.—Prize fighter's nose repaired by osteotomy and manual moulding.

of the line of the columella to a loss of the entire nose. Loss of the soft tissue usually requires transportation of the tissue from the forehead, neck, arm, or other accessible locations. Loss of the bony framework may require substitution of cartilage, either autogenous or preserved, for support, either with or without the addition of soft tissue. In fractures from two weeks to several months old, there is usually a lateral deviation of the line of the dorsum with a widening and flattening of the arch. This deformity may be corrected by an osteotomy of the nasal bones at or near their junction with the frontal process of the maxillary bone, and by manual moulding. (See Fig. 3). (Group 3).

In older cases, especially those that occur in childhood and are not elevated until some years later, there is frequently an arrest of the development of the nasal bones. These cases will require in addition to the procedure already described, the insertion of some cartilage for support. The cartilage, which may be either autogenous or preserved, can be carved to accurately fill the defect and give the cosmetic and functional support that is needed. (See Fig. 4 & 5). In some of the old cases a secondary submucous resection may be necessary to give the required freedom from obstruction to the air passage, which is so often connected with the deformity. The septum may be dealt with satisfactorily at the same operation, either by severance of the base with a chisel and re-alignment, removal or replacement (Peer). In one way or another the septal pull must be relieved. (Groups 4 & 5).



Fig. 5.—Old fracture of nose repaired by osteotomy and pickled cartilage graft.

CONCLUSIONS

1. Traumatic conditions of the nose have been outlined and their treatment briefly discussed.

2. Injuries to the nose require the same therapeutic considerations as injuries elsewhere in the body, that is, careful cleansing of the wound, approximation, accurate closure, and reduction of the bony fracture.

3. Loss of tissue, either the soft tissue or the bony framework, may be replaced by transportation of tissue from other parts of the body.



Fig. 4.—Compound fracture (automobile accident) repaired by osteotomy and autogenous cartilage graft eight months after injury. No immediate reduction was done.

4. Preserved cartilage may be used instead of the autogenous transplant. The relative merits of these two procedures were not discussed in this paper.

5. In a large majority of cases, cosmetic as well as functional defects may be improved or completely restored.

with no data on comparative value in the treatment of syphilis of the rabbit; likewise not checked at present as to excretion and concentration in blood and tissues.

3. Nothing is known as yet of possible value in chronic syphilis.

4. Requires one week of full hospitalization.

5. Only 78 of 93 patients followed for only one year, an interval too short to determine permanency of results.

6. Uncertain at present which compound or group of compounds is most suitable for this method.

7. Further intensified study of the method is justified.

OUTLINE FOR TREATMENT OF SECONDARY SYPHILIS

1. Same as for primary syphilis except two additional courses (6 weeks arsenical and 6 weeks bismuth) covering 62 weeks, totalling 36 intravenous injections of arsenical and 28 intramuscular injections of bismuth.

2. These plans usually possible because patients are apt to be young and otherwise healthy adults.

3. Thorough treatment is the surest preventive of the disabling forms of chronic syphilis especially cardiovascular and neurosyphilis.

TREATMENT OF CHRONIC LATENT SYPHILIS

1. Complete and thorough physical examination as the treatment is not standardized but must be suited to individual cases and conditions.

2. Always start treatment with bismuth instead of arsphenamine or neoarsphenamine to avoid Herxheimer reactions resulting from possible exacerbation of concealed lesions.

3. Advisable to give potassium iodide orally with each course of bismuth.

4. Continuous treatment without rest periods for first year of treatment: (a) 10 bismuth at weekly intervals; (b) 10 neoarsphenamine (0.3 to 0.45 gm.) at weekly intervals; (c) 10 bismuth; (d) 10 neoarsphenamine; (e) 10 bismuth (equals 50 weeks totalling 30 bismuth and 20 neoarsphenamine).

5. Rest period of 3 months followed by 12 bismuth at weekly intervals.

6. Rest period of 3 months followed by 12 bismuth at weekly intervals.

7. Thereafter 8 bismuth twice a year for 3 to 5 years.

8. Blood tests at least once a year for balance of life.

9. Treatment to be resumed in case of serologic relapse.

TREATMENT OF BENIGN TERTIARY SYPHILIS

1. Make thorough physical examination; spinal fluid should be examined. Change plan of treatment and dosage to suit individual cases.

2. Always start with bismuth to avoid Herxheimer reactions.

3. Advisable to give iodide orally throughout course.

4. If spinal fluid changes are found it is advisable to substitute tryparsamide (1.0 gm.) for neoarsphenamine in one or two of the courses of arsenical.

5. Continuous treatment for about 18 months: start with 8 of bismuth followed by 8 of arsenical at weekly intervals and alternating for a total of 72 weeks (total 40 of bismuth and 32 of arsenical).

6. Thereafter a course of 8 of bismuth at weekly intervals twice a year for 3 to 5 years.

7. Blood tests once a year for balance of life; resume treatment in case of serologic or clinical relapse.

TREATMENT OF BENIGN TERTIARY SYPHILIS (Alternate Plan)

1. Iodide orally throughout course of treatment.

2. Continuous treatment for about 18 months: (a) Start with 8 of bismuth at weekly intervals followed (b) by 8 of arsenical. Thereafter bismuth alternating at weekly intervals with arsenical for additional 56 weeks, totalling 36 bismuth and 36 arsenical for the whole course.

3. By this plan toxic effects are reduced to a minimum and especially when tryparsamide is being given.

4. Thereafter a course of 8 of bismuth at weekly intervals twice a year for 3 to 5 years.

5. Blood tests once a year for balance of life; resume treatment in case of serologic or clinical relapse.

1. The author has found less intensive treatment advisable in individuals over 50 years of age and very satisfactory for symptomatic relief and good general health.

2. It consists in giving two courses per year for three to five years.

3. Potassium iodide given orally with each course.

4. Each course comprises (a) Four intramuscular injections of bismuth at start; arsenical for fifth dose and then bismuth alternating at weekly intervals with arsenical for a total of 12 treatments (totalling 8 bismuth and 4 arsenical).

5. Rest period of 3 months; course repeated; rest period for three months; course repeated, etc.

SOBISMINOL

1. *Sobisminol Mass* is a complex organic compound of bismuth the chemical structure of which has not been established. Then bismuth content is 19.75 per cent. It is dispensed in capsules carrying 0.75 Gm. (0.150 Gm.

bismuth); dose 2 or 3 capsules three times a day after meals with a glassful of water. Discomfort, stomatitis, diarrhea, etc., may occur.

2. *Sobisminol Solution* is the same compound dissolved in propylene glycol and water; 1 cc. corresponds to 0.020 Gm. of bismuth. Given intramuscularly every three days in successive courses of 15 to 20 injections each. Rapidly absorbed; moderate discomfort. Probably not superior to other soluble bismuth compounds in terms of bismuth content.

Oral Administration Of Bismuth

1. The author has found the oral administration of potassium bismuth tartrate effective in the treatment of acute testicular syphilis of rabbits.

2. But he advises against the oral administration of this compound and sobisminol mass in the routine treatment of *early* syphilis until effectiveness is more definitely established.

3. In the treatment of *chronic* syphilis oral medication is sometimes advisable under the following conditions:

(a) As a form of "follow-up" or consolidation therapy.

(b) For starting treatment and especially in cardiovascular syphilis to avoid Herxheimer reactions.

(c) For combination treatment when arsenicals are given intravenously.

(d) For treatment of travelers and others who cannot take injections or have excessive reactions from them.

4. Otherwise the author prefers at present the intramuscular injection of bismuth as better insuring cooperation and adequate dosage.

Treatment Of Wassermann-Fast Syphilis

1. The problem of treatment is difficult; the author believes that seroresistant syphilis is due to persistent infection.

2. Wassermann-fast if serology is positive after one year of continuous treatment.

3. Make thorough examination. Most cases are due to infection of cardiovascular or central nervous systems or combination of both. Spinal fluid examination required.

4. Prolong the treatment for two years continuously and with full dosage.

5. Thereafter two courses per year for several years.

6. Follow patient for balance of life with periodic serological and clinical examinations.

7. Serologic tests sometimes revert to negative without treatment.

8. Purpose of treatment: to keep patient in best general health and not merely to secure negative blood reactions.

9. Frankly discuss and fully explain the situation and give the patient as much reassurance as possible.

Treatment Of Syphilis In Pregnancy

1. Pregnancy assists the woman in combatting syphilis by increasing immunological resistance but syphilis never helps the child.

2. Adequate treatment started before the fifth month of pregnancy practically insures a healthy non-syphilitic child; after the fifth month it is one of the best methods for the treatment of prenatal syphilis.

3. Conservative dosage advisable (neoarsphenamine 0.3 gm.); bismuth full dosage.

4. If started by fifth month 8 neoarsphenamine followed by 8 bismuth at weekly intervals with repetition of alternate courses without rest periods to delivery, aiming to finish with 3 or 4 neoarsphenamine.

5. If started after fifth month, neoarsphenamine alone at weekly intervals to delivery.

6. Resume 2 or 3 weeks after delivery until minimum amount of total treatment has been given or for at least 6 months after first negative Wassermann reaction.

Treatment Of Congenital Syphilis

1. Blood tests of children born of syphilitic mothers advisable 6 weeks after birth. If positive and confirmed or if clinical signs are present treatment is started.

2. If negative, repeat 3 and 6 months later and annually up to 3 or 4 years. Late manifestations nearly always appear by this time. When positive and confirmed start treatment.

3. In *early* congenital syphilis: (a) 8 intramuscular injections of neoarsphenamine (0.010 gm. per each 2 pounds) at weekly intervals; (b) followed by 8 intramuscular injections of bismuth (0.002 gm. per each 2 pounds; (c) continue with alternate courses for 72 weeks regardless of serologic reactions. Thereafter keep child under observation with periodic clinical and serological examinations until puberty is passed. Resume treatment in case of serologic or clinical relapse.

4. In *late* congenital syphilis: Plan same as for chronic syphilis of adults. Dosage according to weight.

Treatment Of Cardiovascular Syphilis

1. Treat in such a way as to do no harm. Require small dosage. *Never treat cardiac cases with decompensation.* Never use arsphenamine. Neoarsphenamine preferred; dosage 0.1 or 0.2 gm. (never higher).

2. Important general medical care: (a) adequate rest; (b) restriction of physical activity; (c) digitalis when needed; (d) nitroglycerin or theobromine derivatives for pain.

3. Avoid even minor drug reactions; avoid Herxheimer reactions.

4. Give iodides orally throughout treatment.

5. Always start with bismuth or bismarsen intramuscularly at weekly intervals for first 8 to 12 treatments.

6. Thereafter same as for tertiary syphilis with great care in dosage and especially with neoarsphenamine.

7. Make haste slowly; minimum treatment should cover 2 to 3 years.

Treatment Of Neurosyphilis

1. *Asymptomatic* invasion and infection occurs in the early stages of syphilis in about 30 per cent of patients; detected only by spinal fluid examination. Treatment same as for acute early syphilis.

2. In early syphilis always examine spinal fluid at end of first year of treatment; if positive, even with no symptoms, more radical treatment is required.

3. In late *symptomatic* neurosyphilis the most to be hoped for is temporary arrest and relief from troublesome symptoms.

4. In late neurosyphilis the aims of treatment are: (a) symptomatic relief; (b) freedom from progression or relapse; (c) serologic negativity.

5. Treatment must be prolonged and at least 2 to 3 years.

6. The author advises trial of medicinal treatment at first for at least six months. This comprises iodide orally with intramuscular injections of bismarsen (0.2 gm.) alternating at weekly intervals with intravenous injections of tryparsamide (2.0 gm.) for a total of 12 injections of each. If results are encouraging, continue as in the treatment of tertiary syphilis.

7. Have the eye grounds examined and stop tryparsamide if dimness of vision occurs. (Use arsphenamine or neoarsphenamine).

8. Tryparsamide is contraindicated in optic atrophy and cranial nerve deafness; also in tabetics with marked ataxia, bladder and rectal symptoms.

9. *Intraspinal therapy* is indicated: (a) In tabes for relief of pain if systemic medication fails to afford relief; (b) in optic atrophy; (c) in elderly tabetics where malarial treatment is contraindicated.

10. *Malarial treatment* is indicated in: (a) all cases of pre-paresis and paresis failing to respond to treatment with bismarsen and tryparsamide; (b) all cases of neurosyphilis in congenital syphilitics. It is contraindicated in elderly patients, those with cardiac disease, nephritis or other serious constitutional disability.

11. Give a course of tryparsamide before and after malarial treatment and thereafter courses of tryparsamide and bismuth or bismarsen for about 2 to 3 years.

Treatment Of Syphilis In Special Types Of Cases

1. *Nephritis*: Responds best to arsphenamine. The dose and intervals should be modified according to requirements of each case; moderate doses (0.2 to 0.3 gm.) at weekly intervals usually suffice. Syphilitic nephritis usually responds very rapidly to treatment.

2. *Hepatitis*: Do not use arsphenamine or neoarsphenamine. Bismuth and iodides preferred. Arsenicals may be tried later but with caution and only if functional tests (icterus index and Van den Bergh) are satisfactory.

3. *Syphilis and Tuberculosis*: If there are open syphilitic lesions just enough treatment to heal them; in arrested tuberculosis treat with great care; mercury and iodides should not be given; small doses of arsphenamine or neoarsphenamine at weekly intervals for not more than eight in a course, followed by six to eight of bismuth. Repeat after rest periods of three months. Avoid reactions; stop treatment if untoward symptoms or loss of weight occur.

Serologic Tests In Relation To Treatment and Cure

1. They should be brought to a permanent state of negativity by methods embracing the maximum of sensitiveness consistent with specificity.

2. In early syphilis treatment should be carried out continuously for at least one year regardless of negative serologic reactions. If still positive treatment should be continued as for Wassermann-fast syphilis.

3. They are indicated at least once or twice a year for the balance of life until more reliable criteria of cure are established.

4. They are extremely valuable for the detection of relapse and resumption of treatment when this is not possible by clinical and radiological examination.

5. Every case of syphilis requires one or more examinations of the spinal fluid; no case can be regarded as cured when showing positive changes even if the blood reactions are negative.

Is Syphilis Curable?

1. Probably "not" unaided by treatment as immunological resistance alone is unable to effect a complete recovery in the great majority of cases.

2. Doubtless "yes" in at least 80 to 90 per cent of cases of acute early syphilis treated by the continuous method for at least one year.

3. Many uncured and resistant cases are only poorly treated ones.

4. Doubtless "no" in many cases of chronic syphilis insofar as biological or com-

plete cure is concerned in the sense of eradication of all infection.

5. But "yes" in most cases of chronic acquired and congenital syphilis insofar as "clinical cure" is concerned, which means a sufficient eradication of the infection to relieve symptoms and to prevent further progress of the disease over the usual span of life.

6. The dictum "once Syphilitic always Syphilitic" is no longer necessarily true and the medical profession and laity should realize this fact.

A Study of Infant Mortality In Oklahoma 1934-1938

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A study of infant mortality in Oklahoma is presented at this time in the hope that it will stimulate interest among the medical profession of the state and renew their efforts to further reduce the number of infant deaths each year. It is not the purpose of this paper to make specific recommendations on how more infant deaths can be prevented, but merely to point out that many needless deaths occur.

A refresher course in pediatrics is now being conducted by the Committee on Postgraduate Education of the State Medical Association. This course is a cooperative effort of the State Medical Association, the Commonwealth Fund of New York, and the Oklahoma State Health Department.

Infant mortality in Oklahoma has decreased from 60.5 per 1000 live births in 1934 to 49.7 in 1938; the average for the five year period being 56.3. The rate for colored infants was almost double that for whites.

A study of infant mortality for the five-year period was made because of variations which occur from year to year and in order to better understand the real problem in Oklahoma. The material used in the study was the data given on death certificates filed with the Division of Vital Statistics of the Oklahoma State Health Department. No special querying was done and all death certificates for infants under one year of age dying during this five year period are included in the study.

There were 12,302 infant deaths recorded during this five year period and 10,421 of this number, or 84.7 per cent, were deaths of white infants and 1881 or 15.3 per cent were deaths of colored infants.

Table I shows the number of infant deaths and the rate by color for each year included in the study and for the entire five year period. The rate recorded for the period was 56.3 per 1000 live births. The colored rate of 108.6 was more than double the white rate of 51.8.

Since infant death rates are based on live births, the size of these rates is dependent upon the completeness of the reporting of both births and deaths. Thus, the filing of birth certificates is important, not only for the individual, but also for the accuracy of such data as are presented here. Infant mortality has been studied by age groups, by groups of causes, and certain specific causes and by seasonal variation.

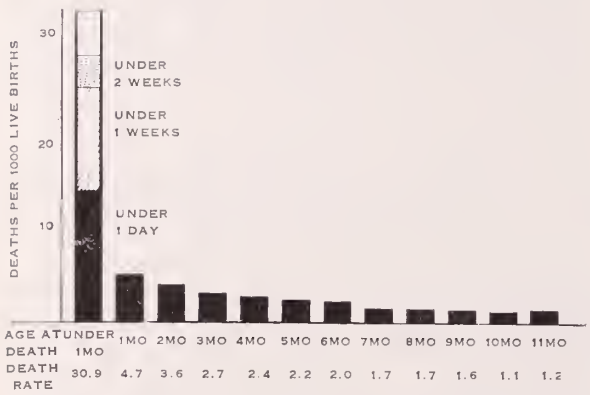
INFANT MORTALITY BY AGE GROUPS

The present infant death rate in Oklahoma is largely due to the high neonatal death rate, as well as a high death rate among infants from one to twelve months of age in certain groups of causes in certain seasons of the year. The neonatal death rate of 30.9 per 1000 live births is 54.9 per cent of all the infant deaths. Mortality among infants is shown in Table II, according to age at death. These mortality rates are shown graphically in Chart I.

TABLE NO. I
NUMBER OF INFANT DEATHS WITH RATES PER 1000 LIVE BIRTHS, BY COLOR FOR FIVE YEAR PERIOD 1934 TO 1938

	TOTAL		WHITE		COLORED	
Year	No.	Rate	No.	Rate	No.	Rate
1934	2864	60.5	2447	56.4	417	104.8
1935	2384	54.6	2039	50.5	345	103.5
1936	2059	60.0	2114	55.0	395	116.8
1937	2345	56.5	1984	51.8	361	112.8
1938	2200	49.7	1837	45.1	363	106.1
Total	12302	56.3	10421	51.8	1881	108.6

CHART 1
AVERAGE ANNUAL INFANT MORTALITY IN EACH MONTH OF LIFE FOR THE FIVE YEAR PERIOD 1934 - 1938



It is a well known fact that deaths of infants, age one to twelve months, are easier to prevent than neonatal deaths. If our infant mortality rate is to be reduced to the minimum, deaths in both groups must be prevented.

TABLE NO. II

INFANT DEATHS WITH AVERAGE ANNUAL DEATH RATES PER 1000 LIVE BIRTHS BY AGE FOR THE FIVE YEAR PERIOD 1934 to 1938.

Age	Total	Per Cent	Rate Per 1000 Live Births
All ages	12302	100.00	56.3
Under one day	2805	22.80	12.8
One day to one week	2213	17.99	10.1
One week to two weeks	865	7.03	3.9
Two weeks to three weeks	507	4.12	2.3
Three weeks to one mo.	364	2.96	1.7
Total under one mo.	6754	54.90	30.9
One month	1031	8.38	4.7
Two months	776	6.31	3.6
Three months	595	4.84	2.7
Four months	530	4.31	2.4
Five months	484	3.93	2.2
Six months	446	3.63	2.0
Seven months	264	2.96	1.7
Eight months	368	2.99	1.7
Nine months	340	2.76	1.6
Ten months	295	2.40	1.1
Eleven months	319	2.59	1.2

INFANT MORTALITY BY GROUPS OF CAUSES

In considering neonatal mortality and mortality of infants from one to twelve months of age by cause, as is shown in Table III, the variations in the rates in the two age groups are found to be different for the various causes. The largest cause of death in the first month was malformations and diseases peculiar to early infancy, which includes all natal causes and deaths said to be due to prematurity. Malformations and diseases of early infancy were responsible for 77.8 per cent of all neonatal deaths. Of the 6754 deaths in the first month 3185 were due to prematurity; 96.6 per cent of deaths due to prematurity occurred in the first month of life. Fifty-nine per cent of the deaths in the age group from one to twelve months were due to respiratory and gastro-intestinal diseases (respiratory 32.8 per cent, gastro-intestinal 26.5 per cent), the rate being 8.3 and 6.8 per 1000 live births, respectively.

Chart II shows in graphic form mortality for the first month and the first year of life by seven groups of causes. The high rate among infants under one month of age further emphasizes the importance of natal causes and diseases of early infancy as an important factor in infant mortality. Any program to further reduce infant mortality must be directed towards the reduction of neonatal deaths and those deaths due to gastro-intestinal and respiratory diseases in infants from one to twelve months of age.

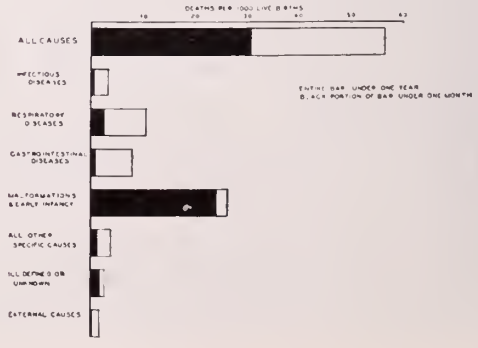
Infant deaths due to causes for which pre-

TABLE NO. III

INFANT DEATHS WITH AVERAGE ANNUAL MORTALITY TWO AGE GROUPS BY CAUSE FOR FIVE YEAR PERIOD 1934 TO 1938

	Total		Under 1 mo.		1 to 12 mo.	
	No.	Rate	No.	Rate	No.	Rate
All causes	12302	56.3	6754	30.9	5566	25.4
Infectious Diseases	891	4.1	125	.6	766	3.5
Respiratory Diseases	2296	10.5	470	2.2	1826	8.3
Gastro-intestinal diseases	1674	7.7	200	.9	1474	6.8
Malformation and early infancy	5734	26.2	5258	24.1	476	2.1
All other specific causes	845	3.9	238	1.1	607	2.8
Ill defined or unknown	592	2.7	393	1.8	199	.9
External causes	270	1.2	70	.3	200	.9

CHART II
AVERAGE ANNUAL MORTALITY IN THE FIRST MONTH AND THE FIRST YEAR OF LIFE BY CAUSE FOR THE FIVE YEAR PERIOD 1934 - 1938 OKLAHOMA



ventive measures are known have been studied in more detail. In the light of knowledge gained from this study, plans may be made to prevent these deaths in the future.

INFANT DEATHS DUE TO SPECIFIC INFECTIOUS DISEASES

Deaths due to whooping cough, diphtheria, syphilis and measles accounted for 756 of the 891 deaths reported as due to infectious diseases; 81 per cent or 116 of the 143 deaths due to syphilis occurred among infants under four months of age. Deaths under one month outnumbered those of all other months, which appears to indicate that the disease is a natal problem.

Whooping cough was most fatal to very young infants; 280 of the 425 deaths due to whooping cough occurred among infants under six months of age. More deaths in this age group were assigned to whooping cough than to any other infectious disease.

Diphtheria was charged with 80 deaths and measles with 143; 27 of the diphtheria deaths were in infants under six months of age. In classifying deaths according to the international list of causes of death, croup when not said to be non-diphtheric must be assigned to diphtheria. There are those who, with considerable authority, say that non-diphtheric croup is a frequent cause of death in very young infants, and some of these deaths may have been due to non-diphtheric croup.

One may also be led to speculate about the large number (44 out of a total of 108) of deaths under six months of age assigned to measles. Are some of these syphilis?

Deaths due to syphilis and diphtheria are preventable. Deaths from syphilis may be prevented by adequate anti-syphilic treatment during prenatal life. Diphtheria deaths, too, may be prevented, since we have a definite immunizing agent against the disease.

Death from whooping cough and measles may not be wholly preventable, but certainly exposure to the disease can be prevented.

INFANT DEATHS DUE TO ACCIDENTS

During the five-year period covered by this study 270 infant deaths were assigned to accidents other than those occurring during labor and delivery. This aspect of infant mortality has been so much overshadowed by the excessive mortality from disease that it has until very recently been overlooked quite generally. As a matter of fact, it should be a matter of national concern. The death rate for the five-year period is 123.6 per 100,000 of population; a rate that is

CHART V

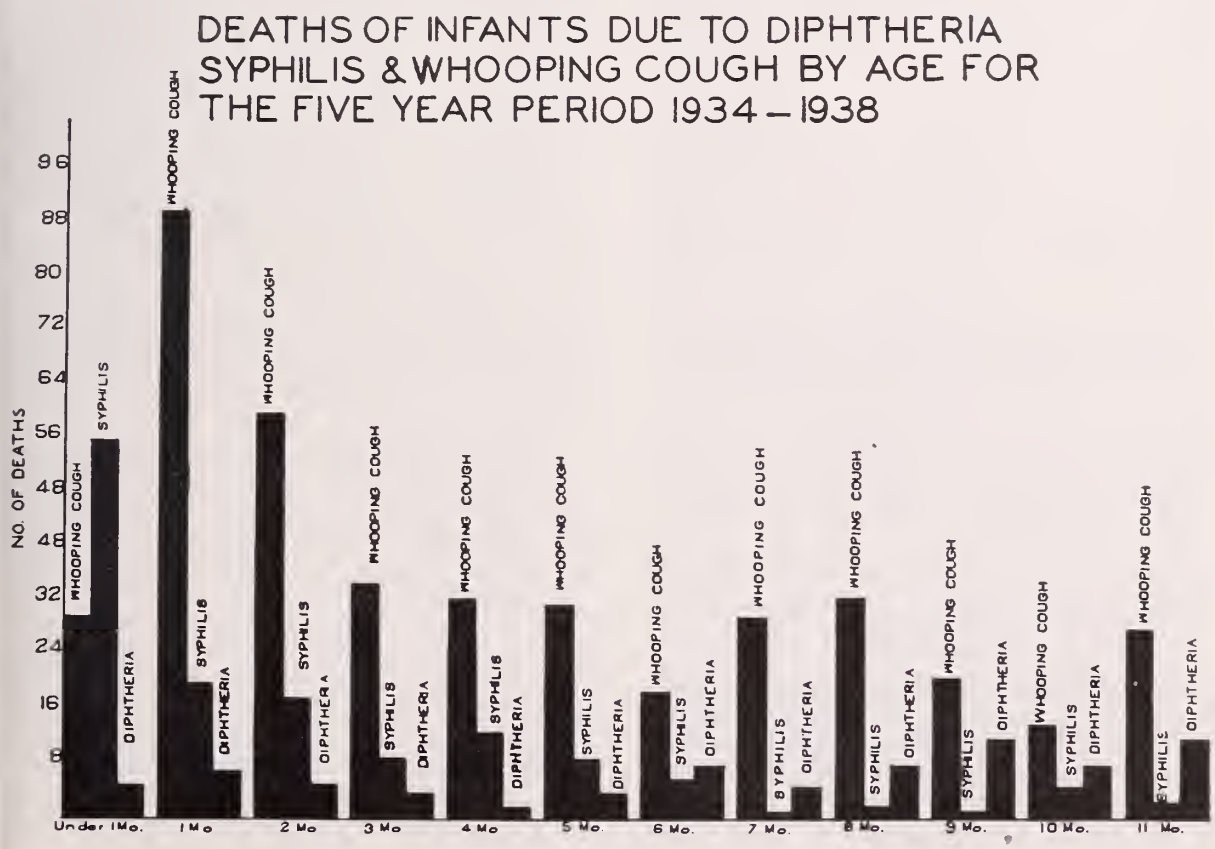


TABLE NO. VII

DEATHS OF INFANTS DUE TO MEASLES, WHOOPING COUGH, DIPHTHERIA AND SYPHILIS FOR THE PERIOD 1934 TO 1938

	Whooping Cough	Diphtheria	Syphilis	Measles
Under 1 month	30	5	56	5
1 month	90	7	20	10
2 months	60	5	18	8
3 months	35	4	9	8
4 months	33	2	13	5
5 months	32	4	9	8
6 months	19	8	6	16
7 months	30	5	1	9
8 months	33	8	2	6
9 months	21	12	1	9
10 months	14	8	5	13
11 months	28	12	3	11
Total	425	80	143	108

higher at least for males than in any other single year of life up to age 21. More than one-third of these were due to mechanical suffocation. Accidents of this type are due, for the most part, to infants sleeping with adults, and the child sleeping on its face with the face buried in a pillow and smothered with bed clothes. The majority of this type of accident occurs in cold months.

Next in order was foreign bodies lodging in air passages. The specific causes of this type of accident were aspiration vomitus, food particles and objects left within reach of the infants. As a precaution against aspiration vomitus, infants may be taught to sleep on their sides.

Burns, scalds and falls into hot water and against stoves came in for their share of accidents. In numerous instances infants fell or were dropped by adults or children.

TABLE NO. IV

NUMBER AND PERCENTAGE OF INFANT DEATHS STATED AS DUE TO PREMATURITY IN TWO AGE GROUPS FOR PERIOD 1934-1938.

	Total		Under 1 mo.		1 mo. to 1 yr.	
	No.	%	No.	%	No.	%
TOTAL	12302	100.0	6754	100.0	5548	100.0
Premature	3297	26.8	3185	47.2	112	2.0
Others	9005	73.2	3569	52.8	5436	98.0

INFANT DEATHS STATED AS DUE TO PREMATURITY

More than one-half of the infant deaths in this study occurred in the first month of life. Of those dying in the first month of 3185 or 47.2 per cent were said to be due to prematurity. Deaths assigned to prematurity accounted for 25.9 per cent of all infant deaths, while only two per cent of the deaths from one to twelve months were ascribed to this cause. Adequate prenatal care and proper care of the premature infant would, no doubt, prevent a large portion of these deaths.

SEASONAL VARIATION IN INFANT MORTALITY

The seasons of the year influence infant mortality as is shown in Table V, Chart III. For all infant deaths, the rates are lower in the warm months.

For neonatal deaths, there is a gradual downward trend in the rate from January to late fall, when the rate begins its upward swing. The change, however, cannot be said to have any particular significance so far as any seasonal variation is concerned. This is probably due to the fact that the greater part of neonatal deaths are caused by malformations and diseases peculiar to early in-

TABLE NO. V

TOTAL INFANT DEATHS WITH AVERAGE MONTHLY RATES PER 1000 LIVE BIRTHS BY CALENDAR MONTH AND IN TWO AGE GROUPS FOR THE PERIOD 1934-38.

Month	Total		Under 1 mo.		1 mo. to 1 year	
	No.	Rate	No.	Rate	No.	Rate
Total	12302	56.3	6754	30.9	5548	25.4
January	1292	64.1	526	26.5	746	33.6
February	1139	62.1	563	30.7	576	31.4
March	1183	63.9	600	32.4	583	31.5
April	1033	63.5	447	27.5	586	36.0
May	1026	65.2	522	33.2	504	32.0
June	977	59.1	473	28.6	504	30.5
July	967	50.7	648	34.0	319	26.7
August	940	46.9	595	29.7	345	17.2
September	877	44.0	505	25.3	372	18.7
October	929	48.1	579	29.9	350	18.2
November	925	55.0	627	37.3	298	17.7
December	1034	57.2	669	37.0	365	20.2

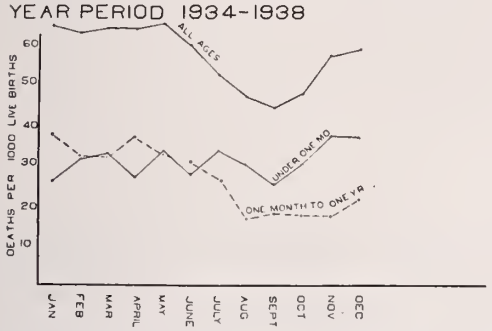
fancy, which are not influenced by season of the year. On the other hand, death rates for infants from age one to twelve months are highest during winter months, reached a minimum in August.

When this seasonal variation in the death rate of infants from one to twelve months of age is studied by cause, there is found a marked difference in seasonal distribution of deaths from gastro-intestinal and respiratory diseases.

Respiratory diseases are responsible for the high rates in the winter months when the maximum rate of 20.6 is reached. From January to August there is a steady decline when the minimum of 3.5 is reached. Gastro-intestinal diseases do not show the marked variations from summer to winter that we find in respiratory diseases. The maximum

CHART III

TOTAL DEATHS WITH AVERAGE RATES PER 1000 LIVE BIRTHS BY CALENDAR MONTH AND IN TWO AGE GROUPS FOR THE FIVE YEAR PERIOD 1934-1938



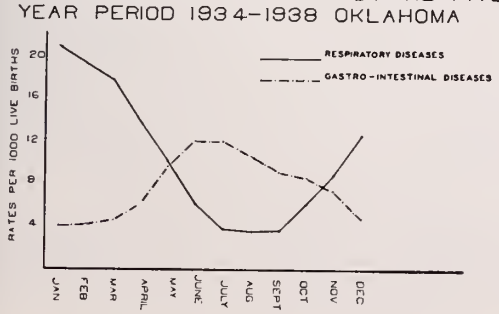
rate of 11.9 was reached in June. From this point on to the month of January there was a steady decline to 4.0, the minimum rate shown. Sixty-three per cent of the deaths due to respiratory diseases fall in the five months — November through March. Nearly one-half of the gastro-intestinal deaths occurred in the months of June to September, inclusive. A reduction in the number of deaths in these two groups would cause a marked decrease in mortality of infants from one to twelve months of age.

Discussion

The 12,302 infant deaths in Oklahoma which occurred in the five year period of this study, gives the State an infant mortality rate of 56.3 per 1000 live births. The infant mortality rate varies in different states from 39 to 124 per 1000 live births. If the infant death rate of 39 (the lowest) had been Oklahoma's rate during the past five years, approximately 3700 babies would have been saved. Whooping cough, diphtheria and syphilis caused a large number of deaths, many of which are easily preventable. Gastro-intestinal diseases still cause a large number of deaths among infants, although in Oklahoma there has been a decided drop in the last ten years. Proper sanitation and inspection of water and milk supplies would materially reduce the deaths due to gastro-intestinal disease.

CHART IV

AVERAGE MONTHLY DEATH RATES PER 1000 LIVE BIRTHS OF INFANTS ONE MONTH TO ONE YEAR OF AGE BY CALENDAR MONTH OF DEATH FOR THE FIVE YEAR PERIOD 1934-1938 OKLAHOMA



Prematurity is responsible for approximately one-half of all infants dying in the first month of life and for nearly 27 per per cent of all infant deaths. The solution to the problem of preventing premature deaths calls for close cooperation between the attending obstetrician and the pediatrician.

Summary

1. The 12,302 recorded infant deaths in Oklahoma for the five year period 1934-1938, reveal an infant death rate of 56.3 per 1000 live births.
2. Fifty-four point nine per cent of all infant deaths fall within the first month of life.
3. Prematurity was responsible for 47.2 per cent of all neonatal deaths and 26.8 per cent of all infant deaths. Malformations and diseases of early infancy, including prematurity, were responsibly for 77.9 per cent of all neonatal deaths.
4. Syphilis, whooping cough, diphtheria, and measles were responsible for 84.8 per cent of the deaths due to infectious diseases.
5. Accidents other than those occurring during labor and delivery caused 270 deaths during the five year period. About one-third of these accidents were due to mechanical suffocation.
6. For all infant deaths, rates are lower in the warm months and highest in the cold months. The rates for neonatal deaths show no significant changes with the seasons.
7. Death rates from respiratory diseases among infants one to twelve months of age show marked increases during the winter months of the year, whereas, rates from gastro-intestinal diseases are highest in summer months.

TABLE NO. VI

DEATHS FROM GASTRO-INTESTINAL AND RESPIRATORY DISEASES OF INFANTS ONE MONTH TO ONE YEAR OF AGE WITH AVERAGE MONTHLY RATES PER 1000 LIVE BIRTHS BY CALENDAR MONTH OF DEATH FOR THE FIVE YEAR PERIOD 1934 TO 1938.

	Gastro-Intestinal Diseases		Respiratory Diseases	
Month	No.	Rate	No.	Rate
Total	1674	7.7	2296	10.5
January	80	4.0	408	20.6
February	75	4.1	349	18.9
March	84	4.5	326	17.6
April	101	6.2	221	13.5
May	151	9.6	162	10.2
June	197	11.9	106	6.4
July	223	11.7	73	3.8
August	211	10.5	70	3.5
September	182	5.1	85	4.2
October	163	8.4	124	6.4
November	123	7.3	146	8.7
December	86	4.8	228	12.4

Some Observations in Appendicitis

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The mortality from appendicitis and its complications has not been materially lowered in the past twenty years. We are of the opinion that the reason for this lies in the lack of knowledge of the nerve supply to the appendix. If there were more pain associated with appendicitis, and if it started in the right side instead of the epigastrium, a mortality would be rare.

There is no sensory (pain) nerve supply to the appendix. Obstruction of this organ stimulates the autonomic nerves in the plexuses of Meissner and Aurerbach to give rise to sensations in the epigastric region described as "bloating," fullness, cramping or "belly-ache." We know that there is no "soreness" in the area of the appendix until the parietal peritoneum is involved in the inflammatory process. This is because the latter has a sensory nerve supply.

In general, we can say that appendicitis begins with obstruction at some point in the lumen of the appendix. The distention and effort to expel the contents distal to the obstruction results in the stimulation of the autonomic nerve supply which is manifested by epigastric distress. This may be referred to as appendiceal "colic." If the obstruction is relieved by passing of a fecolith or straightening of a kink, well and good. If not, however, in a few hours there is a reflex partial stasis of the entire G. I. tract resulting in loss of appetite, nausea, or more infrequently, involuntary vomiting. Inflammation with formation of pus readily ensues, and with this progression there is involvement of the parietal peritoneum in the inflammatory process. This is manifested by soreness in the right side in the area of the appendix. The body temperature at this time will usually be between 98.6 and 100 degrees. This is now in the stage of acute suppurative appendicitis and the right sided muscle guard and local tendereness are present. The white blood count has usually risen to 10,000 or above with an increase in polymorphonuclears. As this condition progresses the pressure from within the lumen gradually decreases the amount of blood in the walls of the appendix until we have a point of gangrene which is usually in the area of a fecolith. The inflammation may have caused a paralysis of the autonomic nerves with a relief of the epigastric pain. The point of gangrene now gives way and the pus is emitted into the general peritoneal cavity. At this point the entire clinical picture suddenly changes. The patient may notice a sudden decrease or increase in pain and he develops an apprehensive expression. The abdomen becomes rigid in all areas and there is complete intestinal stasis (The absence of audible peristalsis is probably one of the most valuable signs in the recognition of an early rupture). The pulse and temperature bound upward; both of which are over 100. The patient now has peritonitis, and the treatment, which should have required a simple operation, now becomes a complex problem, which may severely test the most able surgeon.

ACUTE APPENDICITIS

1. The onset of distress in the epigastrium is almost universally present. If this point cannot be brought out in the history, one should hesitate to operate for appendicitis. This complaint is usually in the center of the epigastrium. However, the patient may refer to the area of the umbilicus. If this one symptom can be illicited in the history it helps exceedingly to rule out right-sided genitourinary pathology and pelvic inflammatory disease.

2. The history of a previous similar attack can be obtained in many cases. If this is not possible, there may be a history of "indigestion," constipation, peptic ulcer, or "colitis." We are of the opinion that once a person has had an attack of appendicitis without rupture he will continue to have symptoms referable to the appendix from time to time until it is removed.

3. The value of the white blood count in appendicitis has been the subject of much debate in recent years. Every surgeon has had the experience of removing an acute suppurative or even perforated appendix from a person who only thirty minutes previous had a normal white blood count. On the other hand, the same surgeon may have hastily removed a subacute or chronic appendix from a person exhibiting a white blood count over ten thousand with a relative increase

in polys. We believe that too much emphasis is being placed on the white blood count. Not that the hazard lies so much in a hurried appendectomy, possibly resulting in the encountering of a normal appendix, but in the fact that a normal or subnormal white count may cause a lethal period of "observation" allowing time for the dreaded rupture.

4. Nausea is present in over 90 per cent of all cases of acute appendicitis. However, vomiting is present in less than one-half of the cases. The average senior medical student will state that pain followed by nausea and vomiting is typical of acute appendicitis. Vomiting is unusual. This percentage of vomiting is even less if the surgeon distinguishes between the voluntary and involuntary types. Patients may induce vomiting, hoping that it will relieve their symptoms. In some cases vomiting may be traced to the taking of a saline laxative.

5. The point of maximum tenderness will vary according to the location of the appendix. In about half of the cases this will be at McBurney's point. The remainder will vary at points above and below. The retrocecal and pelvic acute appendices may reveal no tenderness at any area. The point of maximum tenderness will aid at times in the placement of an incision and thereby facilitates the removal of the appendix.

6. The temperature is frequently of diagnostic value, in that in adults it seldom exceeds 100 degrees, if the appendix is not ruptured. The temperature may be normal even in the presence of a suppurative, gangrenous appendix. This can therefore be of a negative significance in differential diagnosis. For instance, if the temperature in an adult is over 100 degrees and the abdominal signs do not indicate a ruptured appendix one must stop and consider the possibility of pathology in other organs. However, in children we see much higher temperatures, being frequently above 100 degrees without rupture.

7. The urine as a rule is not regarded as a diagnostic aid in appendicitis, but may show a trace to one plus albumin and one to four plus acetone depending on the duration of the attack. The appearance of white or red blood cells in the urine should not delay the operation providing the history and clinical findings point to appendicitis. Both white and red blood cells are found in a catherized specimen in a small number of cases due to the close approximation of the inflamed appendix to the ureter or bladder.

Chronic Appendicitis

I realize that there is still disagreement as to the correctness of the term "chronic appendicitis," so I am using this term in a strictly clinical sense to designate "those persons having recurrent attacks of a mild nature characterized by abdominal distress, constipation, nausea, and a positive Morris' point."

The person who is suffering from chronic appendicitis is in reality more unfortunate than the one who has an acute attack. In the latter the diagnosis is readily made and the trouble promptly removed.

In this class of patients fall many who claim to be suffering from "acid stomach," "colitis," peptic ulcers, chronic constipation, and allergic gastroenteritis. These patients suffer from chronic indigestion and are constantly having to watch their diet. From time to time they take various laxatives and enemas for relief of the feeling of fullness. The most deplorable aspect of this common affliction is the age group affected by it. It is the young adult who is most commonly affected. Many of these cases will sooner or later become acute and the diagnosis will be made.

1. The white blood count is usually normal in these cases, unless it is taken during a subacute exascerbation, and even then it will be within normal limits if the subacute phase has existed for several days due to the gradual formation of a resistance to the inflammation.

2. The history of bowel irregularity with recurrent attacks of constipation is common and this is many times in the form of a recurrent constipation at weekly or monthly intervals. Occasionally this is followed by an unexplained diarrhea. After a careful history and examination, the constipation may be found to be on a relative basis. The feeling of fullness accompanying appendicitis is the same feeling of fullness which accompanys actual constipation. Hence, the sufferer seeks the relief afforded by enemas and laxatives.

3. The appetite in most of these cases is good from time to time, but they will state that it is lost and there is some nausea when they are severely constipated. They frequently trace their nausea to indiscretion in diet. It has been an interesting observation in many of these cases that they are underweight in spite of a good appetite.

4. Of all the signs and symptoms attributed to a chronically diseased appendix there remains one sign that is uniformly present regardless of the location of the appendix. This sign is present before the localization is manifested in an acute attack. It is present after the acute attack has subsided and there is no tenderness at McBurney's point. This sign is present whenever there is pathology involving the appendix. And it is the

finding and interpretation of this sign by the family physician that is the difference between robust health and gastrointestinal "neurosis" in many cases. This sign was first described by Robert Morris of New York in 1910. Morris' point is located one and one-half inches from the umbilicus on a line drawn between the anterior superior spine of the ileum and the umbilicus. There is a right and a left Morris' point, and they are situated over the respective lumbar sympathetic ganglia. Tenderness on deep pressure over the right one alone is indicative of a diseased appendix. Tenderness over both points or the left point alone is indicative of pathology in the pelvis.

5. In the larger clinics a close follow-up on patients operated on for chronic appendicitis reveals a "cure" in about 90 per cent of the cases. The remaining 10 per cent comprises those who were partially or not at all relieved.

6. We wish to stress the point that chronic right lower quadrant pain is seldom appendicitis, and that appendectomy may only aggravate this type of pain. Also, that not infrequently an appendectomy performed during an acute attack in a child has cleared up a chronic constipation and lack of appetite which had persisted since birth.

If we are to lower the morbidity and mortality from appendicitis we firmly believe it will be through the more careful interpretation of the clinical manifestations of the so-called "chronic appendix," because it is the chronic appendix of today that is the ruptured appendix of tomorrow.

In summarizing, let us say that in acute appendicitis a history of onset of distress in the epigastrium is the most reliable symptom, and that local tenderness somewhere in the right lower quadrant is the most reliable sign. Also, that we believe less confidence should be placed in the white blood count, especially as to the stage of the disease.

In chronic appendicitis (which we are convinced is a definite clinical entity) a history of recurrent symptoms referable to the gastrointestinal tract, together with a Positive Morris' point, especially in a child or young adult, makes the diagnosis relatively certain.

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Indications for Surgery In the Treatment of Gastric aud Duodenal Ulcer*

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It was not many years ago when a discussion of the types of peptic ulcer cases that should be selected for surgical treatment would have brought forth vehement arguments by both the internists and surgeons. Today, however, there is a closer approximation of opinion, brought about by more individualization of cases, a result of accurate follow-up statistics of large groups of patients. In a decision of medical versus surgical treatment, one must consider not only the anatomy and physiology of the patient, but also the presence of associated disease, even the economic status and hygienic habits of the individual.

An acute ulcer heals rapidly, therefore, treatment must concern iself with the chronic ulcer. What makes an ulcer chronic? The answer is not known, but we do know that the factors of altered chemistry and motility are important. Both medical and surgical treatment corrects these factors in selected cases.

Duodenal ulcer and gastric ulcer may be considered together as regards the indications for surgical treatment as they are similar histologically and from the standpoint of complications, with the important exception that a gastric ulcer may be a malignant ulcer.

The indications for surgical treatment of gastric and duodenal ulcer are:

(1) Perforation
(2) Obstruction
(3) Hemorrhage
(4) Intractability to medical management

*Read in General Clinical Session, Southern Medical Association, Thirty-Second Annual Meeting, Oklahoma City, Oklahoma, November 15-18, 1939.

(5) Indecision regarding the benignancy of gastric ulcer

(6) Recurrence of an ulcer after operation where medical treatment has failed.

(1) Acute perforation is an emergency demanding immediate surgical intervention and needs no discussion. Chronic perforation will be mentioned later.

(2) Organic obstruction of the pyloris must be distinguished from retention as the latter often yields successfully to medical management. By retention is meant obstruction caused by edema and spasm. However, repeated recurrences of retention often results in stenosis. Such an obstruction due to cicatrization of the pyloris is always an indication for surgery. The two conditions may be distinguished at times only by a trial of medical management followed by a careful re-examination.

(3) The treatment of hemorrhage in gastric and duodenal ulcer is still a point of disagreement even among surgeons. Although the primary hemorrhage is rarely fatal, it is a serious complication. Its seriousness is due chiefly to possible recurrence and secondary complications. In a series of 1804 cases of duodenal ulcer studied by Allen and Benedict (1) at the Massachusetts General Hospital, approximately one-third had had a massive hemorrhage. It is interesting that in the fatal cases the average age was 56.3 years, whereas in those that recovered the average age was 41.8 years. Undoubtedly a factor in the fatal cases was the presence of arterial changes. It is this factor to a great extent that is responsible for the difference of opinion as to the course to pursue during the stage of active bleeding. Finsterer (2) of Vienna represents the radical school and feels that in an elderly patient beyond 60 years of age or in an arterio-sclerotic surgical treatment is urgent. He also believes that in acute hemorrhage from a definitely demonstrated ulcer immediate operation is indicated because it is the most reliable method for the arrest of hemorrhage . Allen (3) urges operation in the better risk patients in the older age group and feels that delay should not be extended beyond forty-eight hours, but states that "peptic ulcer associated with massive hematemesis should be considered an elective procedure regardless of age in those who have spontaneously recovered from an episode of bleeding." Other surgeons such as Lahey (4) and Balfour (5) take a more conservative attitude and feel that a hemorrhage demands at least surgical consideration, but that recurrent massive hemorrhage demands surgery if a fatality is threatened. At this stage, however, it is often too late. It has often been said that the incidence of death from hemorrhage by conservative treatment is less than the mortality associated with gastric operations. It is certainly true that medical treatment failures are increased after the second hemorrhage. A recent article by Meulengracht (6) of Copenhagen reports a series of 368 cases of hemorrhage with a mortality of 1.3 per cent. These cases were treated medically mainly by feeding as against the time-honored method of starvation. He feels that with this low mortality surgery does not come into the question to which all of us will agree providing his low mortality record can be equalled. My own experience with this type of treatment leads me to believe it is a definite advance in the management of hematemesis. Generally speaking, the safest procedure is to treat the patient medically during the stage of bleeding and to elect surgical treatment after two or more hemorrhages with operation preferably during an interval period as it is likely that such an ulcer is callous and hence a recurrence is probable.

(4) Ulcers that are intractable to medical treatment and incapacitate the patient are best treated by operation. I do not believe, however, that surgery is indicated for the relief of "indigestion" simply because medical management has failed. The question arises as to what is meant by failure. Obviously a correct diagnosis is an absolute pre-requisite for such a conclusion. Dr. W. J. Mayo once when asked when medical treatment might be considered a failure answered, "after nine complete and permanent medical cures." Certainly every type of medical treatment should first be tried, including such measures as continuous drip with antacids and the various types of parenteral medication as it is well known that a change in the type of treatment often brings about remarkable relief in some cases. There are certain types of cases, however, that are probably doomed to failure under medical management and if we could select these we would not have to observe the dictum of giving medical management a trial before resorting to surgery. Those cases that complain of constant pain radiating through to the back or at times present only in the back, frequently worse at night, and not relieved by food or alkalies are generally cases of chronic pancreatitis secondary to the ulcer and will obtain relief only from surgery. At times a failure to respond to medical management is due primarily to associated disease of the gall bladder or appendix or infection about the teeth or in the tonsils. These infections must be eradicated and if they are intra-abdominal the gastro-duodenal pathology may be cared for at the same time, other conditions permitting. Intracta-

bility may also be due to marked cicatrization of the ulcer interfering with proper healing, or to peri-duodenal or peri-gastric adhesions interfering with proper motor function. On the other hand the high strung emotionally unstable individual with a persistent hypersecretion and with little or no response to medical treatment is usually a poor candidate for operation as even this does not long give relief. Furthermore, this is the type that develops gastro-jejunal ulcer and, therefore, is probably better off with continued medical management in spite of incomplete relief.

(5) The inability to decide whether a gastric ulcer is malignant or benign should be an indication for surgical exploration. Procrastination because of indecision too often brings remorse. Approximately one-half of the ulcerating gastric lesions are unquestionably malignant when first examined so it is in the remaining 50 per cent that a decision must be reached. Generally speaking, large ulcers roentgenologically are more likely to be malignant, yet size alone is not a definite index. Balfour (7) reported 100 cases of gastric ulcer after gastro-enterostomy with a 10 year follow-up period. Six of these had died of carcinoma and they were all large ulcers. Suspicion that the ulcer is malignant should be aroused if the distress changes in type, if it becomes constant, or if there is a failure to obtain relief with food or alkalies. Loss of appetite and nausea are often significant. It is in these cases of gastric ulcer that I believe gastroscopy has a definite place. Schindler (8) feels that the trained gastroscopist can differentiate the benign from the malignant ulcer. Gastroscopy can further determine the extent of the lesion which may prevent an unnecessary exploration. A satisfactory decision may also be reached with few exceptions by a three weeks' period of observation as advocated by the Lahey Clinic. The patient is kept at absolute bed rest and if after three weeks of strict medical treatment the symptoms are relieved, the ulcer has disappeared or reduced markedly in size roentgenologically, and occult blood has disappeared from the stools, the condition may be considered benign. If doubt still exists, however, surgery is definitely indicated.

(6) The recurrence of an ulcer after a primary operation where medical treatment has been tried without success should likewise be considered a surgical indication.

In conclusion it must be remembered that although there are definite indications for the surgical treatment of gastric and duodenal ulcer they must be carefully considered as the patient may be left more liable to the graver accidents of gastro-jejunal ulcer, vicious vomiting, a mal-functioning gastro-enterostomy, peri-anastomotic gastritis, and even the persistence of the original ulcer. As Ryle (9) aptly stated "the triumphs of surgery are more complete but so are the failures so a careful decision should be made."

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LACK OR FAILURE OF LEGISLATION IMPAIRS TUBERCULOSIS CONTROL

Lack of or faiure to enforce legislation enabling authorities to admit to the hospital and detain there those patients with the infectious stages of tuberculosis diminishes to a large extent the value of the municipal hospital in protecting the community from this disease, Herman Epstein, M.D., and H. W. Hetherington, M.D., Philadelphia, declare in a recent issue of *The Journal of the American Medical Association.*

"The value of a municipal hospital for the isolation and treatment of indigent patients with advanced tuberculosis of the lung is limited by the fact that many patients remain in the hospital for short periods only and leave against advice," they state.

"Refusal of patients to remain in the hospital constitutes one of the greatest difficulties both in the treatment of the individual case and in the protection of the community."

Of 504 consecutive patients leaving the Department of Tuberculosis of the Philadelphia General Hospital, the authors say, "the majority remained in the hospital less than ten weeks, 87 per cent remained less than seven months and only 6 per cent remained more than one year. Excluding those who died, 65 per cent of the Negro and 40 per cent of the white patients left the hospital against advice."

The only patients who are justified in staying at home under the care of private physicians or clinics, the authors believe, are those whose sputums or saliva can be kept negative for the tuberculosis germ and those who are prevented by proper precautionary measures from infecting persons who come in contact with them.

"The proper evaluation of bed rest is frequently not appreciated," they declare. "In cases of less advanced disease and hopeful outcome there is a tendency to allow more activity, while in cases of progressive disease in which the outlook is hopeless, strict bed rest is frequently enforced, even though the physician is aware that the disease is incurable and will progress to fatal termination in spite of treatment. It would seem more reasonable to reverse this procedure.

"The patient with the earlier lesion and better outlook is precisely the one for whom complete bed rest should be urged, since this may be the factor that determines whether or not the disease will be controlled. On the other hand, provided isolation is maintained, strict bed rest need not be enforced on the patient with advanced disease and hopeless outlook, if he would be more contented with some activity.

EDITORIALS

STATE DUES WILL NOT BE ACCEPTED AT THE REGISTRATION DESK AT THE ANNUAL MEETING EXCEPT THROUGH COUNTY SECRETARIES.

THE TULSA MEETING

The meeting arrangements have been so planned that all functions will be under one roof at the Mayo Hotel. Make your reservations as there is going to be a large attendance.

Such guest speakers as this program will present, you cannot afford to miss. Every section has a complete program filled with scientific material of practical value.

The business of the organization will be in the hands of the House of Delegates and the Council and it is to be desired that every member of the House will be thoroughly familiar with the new constitution so that this matter can be disposed of with wisdom and dispatch. It was thoroughly discussed at the last meeting and is now in fine shape for final action.

We are always sure of a cordial reception in Tulsa and everything is arranged for our pleasure and entertainment, therefore, come prepared to have a good time. The doctors wives will see to it that the ladies are given the usual consideration and entertainment for which Tulsa is famous.

You cannot afford to miss this meeting.

Cancer Control: Early is the Word

CLARENCE C. LITTLE, SC.D.,
Managing Director, American Society for the Control of Cancer

Cancer is a curious foe. Second only to heart trouble as a killer and most feared of all causes of death, cancer is in its early stages one of the most curable of serious diseases. Its definite diagnosis requires the services of a highly trained pathologist, but early symptoms which may mean the disease is present are easily recognized by any alert individual. Once cancer is diagnosed the preferred treatment is by a group of specialists and yet the key man in the whole picture of cancer control is the general practitioner to whom patients come for periodic examinations or for advice about apparently harmless conditions. While late cancer causes considerable suffering, in the early stages it is nearly always painless.

It is fitting that this paradoxical disease should be fought by an Army, not chiefly of men but of women, an Army not of destruction but of education, and its war should be a war to save life. Four years ago a small group of physicians, research workers, and club women launched the Women's Field Army of the American Society for the Control of Cancer. Its goal was to reduce cancer mortality and to arouse the interest of men and women everywhere in this disease and the methods and facilities available in their communities for treating and controlling it. Between one-third and one-half of those who now die could and should be saved by early diagnosis and prompt treatment, declared the American Society for the Control of Cancer.

The growth of the Women's Field Army has been rapid. Divisions are now underway in forty-six states, Cancer information centers — local units of the Army — have been established in more than half the counties of the country. Cancer control is receiving more attention than ever before.

A beginning has been made, but only a beginning in this peacetime war. Approximately 150,000 men, women and children were destroyed by cancer in 1939. The needs in the field are great: more clinics, more funds for research, more facilities for indigent patients, above all, more education for the general public.

Working under the supervision of physicians and other experts, women are the leaders and organizers of the fight against cancer. However, the most paradoxical thing about this complex disease is that we cannot leave its control to leaders, to research workers, or medical men. We must all do our bit.

The Field Army suggests three measures that each one may adopt and so play a part in cancer control:

1. Have a comprehensive physical examination once a year, however well one feels. Women over thirty-five years of age should have what the American Society calls the B. P. Examination, covering the Breast and Pelvic areas, semi-annually.

2. Memorize the cancer danger signals, early and usually painless symptoms that may mean the disease is present and should always mean a visit to a physician. They are: any persistent lump or thickening, particularly in the breast; any irregular bleeding or discharge from any body opening; any persistent and unexplained indigestion; any

sore that does not heal normally, especially about the tongue, mouth or lips; any sudden change in the form or rate of growth of a mole or wart.

3. Enlist in the Women's Field Army in April, set aside by Special Act of Congress as Cancer Control Month, and so help the Army carry on its work of education to save lives.

Educate, Save, Enlist. These are the imperatives of the war against this disease. One more word should be emphasized. It occurs in this editorial many times. The word is *Early* — and *Early Is the Watchword in Cancer Control.*

Newspapers' Comment on Court's Decision Reviewed

"Although the time is brief since the United States Circuit Court of Appeals in Washington announced its decision that the practice of medicine is a trade, several of the leading newspapers in the country have already indicated their point of view regarding this decision," *The Journal of the American Medical Association* for March 23 says in an editorial.

"This point of view is not wholly in agreement with the United States Circuit Court of Appeals. A few papers, on the other hand, have expressed their enjoyment in the decision, notably the Washington, D. C., *Times,* the New York *Times* and the Indianapolis *Times.* As might be expected, the New York *Times,* engages in another slur at the American Medical Association and suggests that encouragement by the Association of various experiments 'might have prevented the consideration of such monstrosities as the original Wagner Health Bill and would certainly have prevented a criminal action under the Sherman Act.' This philosophizing of the New York *Times* after the event is a further indication of the complete failure of the editor of that newspaper even to begin to understand what the trouble is all about. Apparently both its editorial writer and Mr. Kaempffert (if they are not one and the same) have developed fixed opinions in this field and are not to be swayed by any attempt to examine carefully into the whole situation and the evidence.

"The Washington, D. C., *Star* points out that the question of law in this case, despite its importance, is overshadowed by the factual issues. The Indianapolis *Star* says that Americans who still oppose the attempted regimentation of the New Deal will derive little comfort from this decision and, it continues, 'The feeling persists that the Department of Justice crusade against the national medical organization may have been prompted less by alleged restraint of "trade" than for the purpose of destroying the desired independence of the medical profession.' Moreover, the St. Louis *Globe-Democrat* emphasizes that 'Doctors are convinced, and correctly, that best interests of the nation's health can never be served by a system that would destroy the intimate relationship between physician and patient, that would put doctors on a salary, that would tend to stifle scientific initiative and the highest type of medical care.' Commenting particularly on this decision, the St. Louis newspaper says 'Legal interpretation often amazes the layman. For the court to designate the practice of medicine a trade seems preposterous. There is and always has been a chasm of distinction between trade and profession. Legal definitions, of course, have before been known to ignore the dictionary. Yet most learned judges have striven to interpret words accurately. Certainly the Congressmen who passed the Sherman Act never faintly imagined their law would be construed to apply to medical practice. This case should be promptly appealed to the Supreme Court. The American Medical Association is fighting for integrity of a profession that has given the United States the finest health protection of any nation in the world. If it is to continue to new achievement it must be free of regimentation, unhampered in development of standards and morale and practice, whose requirements doctors themselves may be justly assumed to know best.'

"The Cincinnati *Times-Star* writes 'This is a very far-reaching decision. Should it hold good in preventing medical societies from disciplining their members, it will prevent bar associations from imposing standards of legal conduct under penalty of disbarment. Its effect upon trade unions would be nothing less than to rule out the closed shop. It is true that the Clayton Act exempts trade unions, as such, from the provisions of the Sherman Act. But the Clayton Act does not exempt any specific action of trade unions. The mere act of joining or organizing a union is not a violation of the Sherman Act, but the act of preventing a non-union man from getting a job in a closed shop would assuredly, under the Washington ruling, be a violation. It seems clear to us that when Congress passed the Sherman Act it used the word "trade" to cover the field of commercial activity. The idea that medical societies, bar associations, etc., might be classed as "trade" groups never occurred to anybody until Thurman Arnold had the bright notion of prosecuting the A. M. A. because he disagreed with its opinion of group medicine. It will be a curious irony if the New Deal effort to dictate the professional standards of physicians should ultimately destroy a privilege sacred to labor unions.'

"The Detroit *Free Press* asks what is to become of the long established distinction between the trades and the professions and hints that such a decision might interfere with freedom of worship, because under this decision 'competition among exponents of creed would become an activity subject to legal inquiry and regulation in case anybody should charge "unfair trade practices" or efforts to "create a monopoly."

"The editorial which appeared simultaneously in the Washington, D. C., *Times* and in the Indianapolis *Times* is devoted primarly to an attack on the unions and says that the doctors and the carpenters seem to be in the same boat. This editorial attacks particularly the leaders of union labor and, by implication, leaders in the field of medicine, arguing that Mr. Arnold is not interested in attacking the workers but only in attacking their leaders. This is the same type of philosophy which says that it is not the German people with whom England is at war but only Hitler.

"A final editorial from the *Daily Idahonian,* published in Moscow, Idaho, uses the whole incident in a manner which will hardly give aid and comfort to Mr. Arnold or any one else who is interested at all in the quality of medical service. This editorial says 'Similarly certain types of healers are barred from most hospitals. Why they should be is something the average layman has never been able to understand. Why osteopaths or chiropractors should be refused the right to hospitalize their patients in buildings endowed by philanthropists for the public good, or built with public funds or through public subscription, is without logic or sane reasoning.'

"No doubt those who have been primarily concerned in breaking down established order in the field of medicine, and who care little or not whether the high standards of medical service which now prevail are wrecked, are rejoicing in this appeal that the hospitals be opened without restraint to every half-educated medical pretender and charlatan."

• THE PRESIDENT'S PAGE •



A STORY

Once upon a time a country doctor was honored by his colleagues by being elected president of their State Medical Association. He never really knew by what count of his virtues this honor had come to him, but only that he was pleased and proud such trust should be placed in him.

He had no revolutionary ideas or panaceas for the curing of the charged ills of his profession because he did not believe that any serious ills existed. At least any ills that a policy of progressive medicine would not cure. This country doctor therefore solemnly promised himself that for his tenure of office he would preach the gospel of progressive medicine and conduct the affairs of the Association through the Council on a fair, equitable and business-like basis.

This creed this country doctor practiced for twelve months. (And he will continue to practice it.) He sought advice and aid on many of his problems; he attended as many meetings of the county societies of the Association as he could, and, finding that it would be impossible to reach the majority of them, he tried to meet through councilor district meetings a representative cross section of the members, so that he might better understand their needs and their ideas as to how to make their medical Association a better and more harmonious organization.

Through all of this work and the many miles traveled, never once did he find a spirit of defeatism prevalent. True, it was not that all communities were booming and the lot of the doctor one of security and prosperity, but irrespective of the condition or the outlook, the family doctors were still practicing not only medicine but the Golden Rule.

So now comes this country doctor to the end of his tenure of office. He still believes in the principles of progressive medicine and the future of his profession. He also has found out much to his joy that progressive medicine was not patented as a creed by any one person, but rather by his profession. He realizes now more than ever before that his Association is in good hands because it is in the hands of every member. He knows that every doctor will take advantage, and gladly so, of every opportunity to better his professional learning, as well as to do his part in making his organization a better one. By the cooperation he has received from individual members, from his committees, and from the Council, he is certain that adequate leadership is present in every county society as well as every community.

In closing this story, this country doctor finds pathos in the theme by virtue of the fact that he wasn't able to see and visit with every member of the Association. Though he failed in this impossible task, he is going back to Chelsea happy and contented in the knowledge progressive medicine is not coming to Oklahoma, but rather that it is here, and here to stay. He still thinks that the words of Teddy Roosevelt when he said, "Every man owes part of his time to the upbuilding of the profession to which he belongs" is one of the best slogans he could recommend to every member of the Association.

He will never forget, but rather he will always revere his associations and his associates. He is going back home to do his part when called upon, and to practice progressive medicine.

W. N. Howard

President.

GUEST SPEAKERS

Annual Session, Oklahoma State Medical Association



ALPHONSE McMAHON, M.D.

Vice-Pres. American Medical Association
Senior Instructor in Medicine, St. Louis University, St. Louis, Mo.



EDWARD H. SKINNER, M.D.

American Board of Radiology, Kansas City, Mo.



HORTON R. CASPARIS, M.D.

Professor of Pediatrics, Vanderbilt University School of Medicine, Nashville, Tenn.



CURTICE ROSSER, M.D.

Professor of Proctology, Baylor University School of Medicine, Dallas, Texas.

PROGRAM

Forty-Eighth Annual Session of the Oklahoma State Medical Association at Tulsa, May 6, 7, 8, 1940

General Information

Headquarters—Mayo Hotel, Tulsa.

Registration — SIXTEENTH FLOOR, MAYO HOTEL. All physicians, except those from outside the state and visiting guests, must hold membership cards for 1940 before registering. Dues will not be accepted at the meeting except from county secretaries. Registration will open at 8:00 a. m. Monday.

Guest Speakers—Alphonse McMahon, M.D., Vice-President American Medical Association, Senior Instructor in Medicine, St. Louis University, St. Louis, Mo.; Edward H. Skinner, M.D., American Board of Radiology, American College of Radiology, Kansas City, Mo.; Horton R. Casparis, M.D., Professor of Pediatrics, Vanderbilt University School of Medicine, Nashville, Tenn.; Curtice Rosser, M. D., Professor of Proctology, Baylor University School of Medicine, Dallas, Texas.

General Sessions—The General Sessions will be held at 2:00 p. m. Tuesday and Wednesday, May 7 and 8, in the Crystal Ballroom, Sixteenth Floor, Mayo Hotel.

House of Delegates—The House of Delegates will meet at 8:00 p. m. Monday, and at 8:00 a. m. Tuesday and Wednesday in the Crystal Ballroom, Sixteenth Floor, Mayo Hotel.

Council—The Council will convene at 3 p. m. Monday, May 6, in the French Room, Mezzanine Floor, Mayo Hotel, and thereafter on the call of the President.

Resolutions—Resolutions to be submitted to the House of Delegates should be prepared and presented at the first meeting.

First Annual Secretaries Meeting—It is hoped that from this meeting will come the impetus to make this an annual affair. The first meeting will be a luncheon Wednesday, May 8, at 12:30 p. m. at the University Club. The entire program will be devoted to Association business between the component county societies and the office of the Association. All officers of the county societies are urged to attend.

Oklahoma Pediatric Society—The meeting of the Oklahoma Pediatric Society will be in the Junior Ballroom, Mezzanine Floor, Mayo Hotel, at 2:00 p. m. on Monday, May 6.

Public Health Meeting—This meeting will be held in the Ivory Room, Mezzanine Floor, Mayo Hotel, Monday, May 6, at 2:00 p. m.

Tuberculosis Symposium—Will be held at 9 o'clock Wednesday morning in the French Dining Room, Mezzanine Floor, Mayo Hotel.

Commercial Exhibits — SIXTEENTH FLOOR, MAYO HOTEL. The finest display of exhibits that have ever been shown at any medical meeting in Oklahoma, outside of the Southern Medical meeting, will be available for your inspection.

Scientific Exhibits—SIXTEENTH FLOOR, MAYO HOTEL. These exhibits will be of intense interest to the entire profession. The exhibits will cover the fields of orthopedics, pathology, hematology, cancer, lung, plastic surgery, and exhibits from the American Medical Association. There also will be a Registry Exhibit of the American Society of Clinical Pathologists.

Clinics—No formal clinics will be held. However, on Monday, Tuesday, and Wednesday mornings at the various hospitals, arrangements have been made for all registered doctors to attend informal clinics. A schedule of these clinics will be posted at the registration desk.

Golf Tournament—The annual Golf Tournament will be Monday afternoon, May 6, at the Oakhurst Country Club. Teeing off time will be one o'clock. An entrance fee of $3.00 will be charged and will cover green fees, accoutrements and buffet dinner. There will be ample time for all contestants to complete their matches and return to the Mayo for the House of Delegates meeting. Prizes are being awarded for the different flights and are unusually attractive.

Medical Reserve Officers—There will be a luncheon Tuesday noon, May 7, on the Mezzanine Floor of the Mayo Hotel. Tickets will be on sale either in the lobby or at the registration desk.

Hall of Health—Tulsa County Medical Society is sponsoring a Hall of Health that will be open to both the lay public and

the profession. This is another outstanding feature of this year's annual meeting. It will be held in the Tulsa Coliseum. It is hoped that the "Lindbergh heart" will be on display.

Women's Auxiliary—The meetings of the Auxiliary will be held in the Open Parlor, Mezzanine Floor, Mayo Hotel. The Executive Committee will meet at 7:30 p. m. Monday, May 6, and the first general meeting will be at 9:00 a. m. Tuesday, May 7.

Women's Program

State Auxiliary Officers

Mrs. E. Eugene Rice, President Shawnee, Oklahoma	Mrs. Geo. Garrison, Parliamentarian Okla. City, Okla.
Mrs. W. A. Fowler, President-Elect Norman, Oklahoma	Mrs. Julian Feild, Vice-President Enid, Oklahoma
Mrs. C. C. Young, Treasurer Shawnee, Oklahoma	Mrs. Chas. Paramore, Secretary Shawnee, Oklahoma

Mrs. E. D. Greenberger, Historian
McAlester, Oklahoma

Convention Program

Registration—Mezzanine Floor, Mayo Hotel

Monday, May 6, 1940

7:30 P.M.—Meeting of State Executive Board, 816 Mayo Hotel.

Tuesday, May 7, 1940

9:00 A.M.—General Meeting in Open Parlar, Mezzanine Floor, Mayo. All Doctors' wives urged to attend.

12:30 P.M.—Luncheon at Tulsa Club Roof Garden $1.10. All visiting ladies invited to attend. Please secure your tickets at registration desk. Following the luncheon there will be a tour of Philbrook Art Museum, starting from the Tulsa Club.

Convention Committees

Maurice J. Searle, M.D., General Chairman

Advisory Committee—W. Albert Cook, M.D.; P. P. Nesbitt, M.D.; George Osborn, M.D.; A. W. Pigford, M.D.; James Stevenson, M.D.; Russell Pigford, M.D.; Charles Haralson, M.D.; Henry Browne, M.D.

Program Committee—E. O. Johnson, M.D., Chairman; Frank A. Stuart, M.D.; Marvin Henley, M.D.

Scientific Exhibits Committee—E. Rankin Denny, M. D., Chairman; H. H. Porter, M. D.; Gifford Henry, M.D.

Commercial Exhibits Committee—S. C. Shepard, M.D., Chairman; W. A. Showman, M.D.; Morris B. Lhevine, M.D.

Finance Committee—H. B. Stewart, M.D., Chairman; J. C. Peden, M.D.; Roy L. Smith, M.D.

Entertainment Committee — Hugh Evans, M.D., Chairman; J. C. Shipp, M.D.; Ned Smith, M. D.

Stationery and Badges Committee — Roy Dunlap, M.D., Chairman; J. Fred Bolton, M.D.; Mont Stanley, M. D.

Hotel Reservations Committee—Ralph McGill, M. D., Chairman; W. D. Hoover, M.D.; B. L. Branley, M. D.

Women Physicians Committee — Luvern Hays, M.D., Chairman; Molly McQuaker, M.D., Marcella Ruprecht, M.D.

Auxiliary Committee—Mrs. W. S. Larrabee, Chairman; Mrs. James Stevenson, Mrs. T. H. Davis, Mrs. Frank L. Flack, Mrs. Leon H. Stuart, Mrs. Hugh Perry, Mrs. Carl Hotz.

Golf Committee—W. J. Bryan, M.D., Chairman; R. Q. Atchley, M.D.; Henry Browne, M. D.

Reserve Officers Committee—T. H. Davis, M. D., Chairman; P. P. Nesbitt, M.D.; Ian MacKenzie, M.D.

Fraternity Dinners Committee—Robert Witcher, M.D., Chairman; Joseph Fulcher, M.D., Hugh Perry, M.D.

Section Hosts Committee — C. E. Bradley, M.D., Chairman; J. C. Brogden, M.D.; Frank J. Nelson, M.D.

Special Clinics Committee — I. A. Nelson, M.D., Chairman; Ian MacKenzie, M.D.; Allen C. Kramer, M.D.

Location of Sections

All sections will meet on Tuesday, May 7, and Wednesday, May 8, at 9:00 a.m. The meeting places are in the Mayo Hotel and are as follows, with the exception of Dermatology and Radiology which meets only on Tuesday, May 7.

Surgery—Junior Ballroom, Mezzanine Floor.

Medicine—Ivory Room, Mezzanine Floor.

Obstetrics and Pediatrics — Room A, Sixteenth Floor.

Urology and Syphilology—Main Private Dining Room, Mezzanine Floor.

Eye, Ear, Nose and Throat—English Dining Room, Mezzanine Floor.

Dermatology and Radiology—Dining Room A, Mezzanine Floor.

House of Delegates—Crystal Ballroom, Sixteenth Floor.

Council—French Room, Mezzanine Floor.

Monday

May 6, 1940

1.—1:00 P.M.—Golf Tournament, Oakhurst Country Club.

2.—2:00 P.M.—Oklahoma Pediatric Society, Junior Ballroom, Mezzanine Floor, Mayo Hotel.
3.—2:00 P.M.—Public Health Department Program, Ivory Room, Mezzanine Floor, Mayo Hotel.
4.—3:00 P.M.—Council Meeting, French Room, Mezzanine Floor, Mayo Hotel.
5.—8:00 P.M.—House of Delegates Meeting, Crystal Ballroom, Sixteenth floor, Mayo Hotel.

Details of Programs follow numerically.

1. *Golf Tournament*

Monday, May 6, 1940
Oakhurst Country Club
W. J. Bryan, M.D., Chairman

Registration—All morning; Entrance fee, $3.00.
1:00 P.M.—Teeing off time.
5:00 P.M.—Buffet Dinner and Accoutrements.
Entrance fee includes everything except caddy fees.

2. *Oklahoma Pediatric Society*

Monday, May 6, 1940
Junior Ballroom, Mezzanine Floor, Mayo Hotel

President—Hugh Graham, M.D., Tulsa.
Vice-President—Ben H. Nicholson, M.D., Oklahoma City.
Secretary—G. R. Russell, M.D., Tulsa
2:00 P.M.—Business Session.
3:00 P.M.—*"Recent Advances in Chemo-Therapy"* and *"Recent Attitudes Toward Thymic Condition"* — Horton R. Casparis, M. D., Nashville, Tenn.
3:45 P.M.—*"The New Tuberculin Patch Test"* — James G. Hughes, M.D., Memphis, Tenn.
Discussions of Pediatric Interests.

3. *Public Health Department*

PROGRAM

Monday, May 6, 1940
Ivory Room, Mezzanine Floor, Mayo Hotel
Grady F. Mathews, M.D., State Health Commissioner, Presiding.
2:00 P.M.—*"Management of the Well Child."* Horton R. Casparis, M.D., Nashville, Tenn.
Discussed by P. J. Collopy, M.D., Director of Maternal and Child Health, Oklahoma Health Department.
2:30 P.M.—*"The Relationship Between the County Health Department and the Private Practitioner."*—William Wood, M.D., Director of Tulsa County Health Department.
Discussed by G. S. Baxter, M.D., Shawnee.
3:00 P.M.—*"The Incidence of Intestinal Parasites in Fecal Samples Collected in Eastern Oklahoma."* (A preliminary report). — Donald B. McMullen, Sc. D., Acting Head of the Department of Public Health and Hygiene, University of Oklahoma School of Medicine; and James K. Gray, M.D., Consulting Pediatrician, Health Dist. No. 1, Oklahoma Health Department.

4. *Council Meeting*

Monday, May 6, 1940
3:00 P.M.
French Room, Mezzanine Floor, Mayo Hotel

5. *House of Delegates*

Monday, May 6, 1940
8:00 P.M.
Crystal Ballroom, Sixteenth Floor, Mayo Hotel

Tuesday

May 7, 1940

1.—8:00 A.M.—House of Delegates, Crystal Ballroom, Sixteenth Floor, Mayo Hotel.
2.—9:00A.M.—Section on General Surgery, Junior Ballroom, Mezzanine Floor, Mayo Hotel.
3.—9:00 A.M.—Section on General Medicine, Ivory Room, Mezzanine Floor, Mayo Hotel.
4.—9:00 A.M.—Section on Eye, Ear, Nose, and Throat, English Dining Room, Mezzanine Floor, Mayo Hotel.
5.—9:00 A.M.—Section on Urology and Syphilology, Main Private Dining Room, Mezzanine Floor, Mayo Hotel.
6.—9:00 A.M.—Section on Obstetrics and Pediatrics, Room A, Sixteenth Floor, Mayo Hotel.
7.—9:00 A.M.—Section on Dermatology and Radiology, Dining Room A, Mezzanine Floor, Mayo Hotel.
8.—2:00 P.M.—General Scientific Session, Crystal Ballroom, Sixteenth Floor, Mayo Hotel.
9.—5:00 P.M.—Tea for Doctors and Wives, Junior Ballroom, Mezzanine Floor, Mayo Hotel.

10—8:00P.M.—Installation of President, Akdar Theater.

11—10:00P.M.—President's Reception and Dance, Crystal Ballroom.

Details of Program follow numerically.

1. *House of Delegates Meeting*

Tuesday, May 7, 1940
8:00 A.M.

Crystal Ballroom, Sixteenth Floor, Mayo Hotel.

2. *Section on General Surgery*

Tuesday, May 7, 1940
O. C. Armstrong, M.D., Sponsor
Junior Ballroom, Mezzanine Floor, Mayo Hotel.

Chairman—John McDonald, M.D., Tulsa.
Vice-Chairman—Charles R. Rountree, M.D., Oklahoma City.
Secretary—John Powers Wolff, M.D., Oklahoma City.

9:00 A.M.—"*Acute Appendicitis in an Oklahoma Hospital.*" — Erma O. Johnson, M.D., Tulsa. Discussion: J. B. Darrough, M.D., Vinita; T. J. Hardman, M.D., Tulsa.

9:30 A.M.—"*Transplantation of Ureters for Exstrophy of the Bladder.*"—George H. Kimball, M.D., Oklahoma City. Discussion: Henry S. Browne, M.D., Tulsa; C. B. Taylor, M.D., Oklahoma City.

10:00 A.M.—"*The Negro in Proctology.*" — Curtice Rosser, M.D., Dallas, Texas.

10:30 A.M.—"*Surgery of Rectal and Recto-Sigmoid Cancer With Reference to Mortality and Perineal Outlet.*"—Raymond L. Murdoch, M.D., Oklahoma City. Discussion: V. K. Allen, M.D., Tulsa; F. A. Hudson, M.D., Enid.

11:00 A.M.—"*Hyperinsulinism Due to Adenoma of Pancreas-Surgical Removal With Care.*"—LeRoy D. Long, M.D., Oklahoma City. Discussion: John Powers Wolff, M.D., Oklahoma City.

11:30 A.M.—"*Relationship of Spina Bifida Occulta to Industry.*"—M. A. Connell, M.D., Picher. Discussion: F. A. Stuart, M. D., Tulsa.

3. *Section on General Medicine*

Tuesday, May 7, 1940
D. W. LeMaster, M.D., Sponsor
Ivory Room, Mezzanine Floor, Mayo Hotel

Chairman—E. R. Musick, M.D., Oklahoma City.
Vice-Chairman—E. G. Hyatt, M.D., Tulsa.
Secretary—E. H. Shuller, M.D., McAlester.

9:00 A.M.—"*Treatment of Bladder Neck Pathology.*" — Shade Neely, M.D., Muskogee. Discussion: E. L. Cohenour, M.D., Tulsa.

9:30 A.M.—"*Rheumatic Fever and Its Treatment.*"—C. J. Roberts, M.D., Enid. Discussion: Clark Hall, M.D., Oklahoma City.

10:00 A.M.—"*The Use of Sulfapyridine in the Treatment of Pneumonia.*"—John B. Morey, M.D., Ada. Discussion: Dan Perry, M.D., Cushing.

10:30 A.M.—"*A General Practitioner's Practice With the Macrocytic Anemias.*"—John R. Taylor, M.D., Kingfisher. Discussion: Ellis Lamb, M.D., Clinton.

11:00 A.M.—"*The Diagnosis and Treatment of Malaria.*"—W. L. Shippey, M.D., Poteau. Discussion: Floyd Waters, M.D., Hugo.

11:30 A.M.—"*Pneumothorax in Non Tuberculous Diseases of the Lungs.*"—Paul Cameron, M.D., Tulsa. Discussion: Richard M. Burke, M.D., Clinton.

12:00 Noon—"*Liver Damage.*"—K. C. Reese, M.D., Tulsa. Discussion: A. W. White, M.D., Oklahoma City.

4. *Section on Eye, Ear, Nose and Throat*

Tuesday, May 7, 1940
Hugh Evans, M.D., Sponsor
English Dining Room, Mezzanine Floor, Mayo Hotel

Chairman—James R. Reed, M.D., Oklahoma City.
Vice-Chairman—Paul J. Craden, M.D., El Reno.
Secretary—D. L. Edwards, M.D., Tulsa.

9:00 A.M.—Chairman's Address—James R. Reed, M.D., Oklahoma City.

9:45 A.M.—"*Oculo-Glandular Tularemia.*"—J. Franklin Gorrell, M.D., Tulsa. Discussion: A. H. Davis, M.D., Tulsa.

10:30 A.M.—"*Management of Chronic Otitis Media.*"—Ralph W. Rucker, M.D., Bartlesville. Discussion: W. O. Smith, M.D., Tulsa.

11:15 A.M.—*"Treatment of Trachoma."*—J. H. Hammond, M.D., Tulsa. Discussion: Clinton Gallaher, M.D., Shawnee.

12:00 Noon—*"Neuroses of the Pharynx."*—Harry Ford, M.D., Oklahoma City. Discussion: L. C. McHenry, M.D., Oklahoma City.

5. *Section on Urology and Syphilology*

Tuesday, May 7, 1940

Joseph Fulcher, M.D., Sponsor

Main Private Dining Room, Mezzanine Floor, Mayo Hotel

Chairman—Henry Browne, M.D., Tulsa.

Vice-Chairman—Robert Akin, M.D., Oklahoma City.

Secretary—K. F. Swanson, M.D., Tulsa.

9:00 A.M.—*"Prostatitis."*—G. E. Johnson, M.D., Ardmore.

9:45 A.M.—*"Diverticulectomy."*—Anson L. Clark, M.D., Oklahoma City.

10:30 A.M.—*"Renal Tumors—Wilms Type."*—Henry Browne, Tulsa.

11:15 A.M.—*"Horseshoe Kidney-Case Report."* With Films. — Alfred Sugg, M.D., Ada.

6. *Section on Obstetrics and Pediatrics*

Tuesday, May 7, 1940

Hugh Graham, M.D., Sponsor

Room A, Sixteenth Floor, Mayo Hotel

Chairman—Carl F. Simpson, M.D., Tulsa.

Vice-Chairman—Ben H. Nicholson, M.D., Oklahoma City.

Secretary—Dick Lowry, M.D., Oklahoma City.

9:00 A.M.—Chairman's Address.—*"Normal Delivery."*—Carl F. Simpson, M.D., Tulsa.

9:45 A.M.—*"Minor Complaints Associated With Pregnancy and Their Treatment."*—Brunel D. Faris, M.D., Oklahoma City. Discussion: Pierre N. Charbonnet, M.D., Tulsa.

10:30 A.M.—*"Etiology and Treatment of Vomiting in Pregnancy."*—J. Wm. Finch, M.D., Hobart. Discussion: J. B. Eskridge, M.D., Oklahoma City.

11:15 A.M.—*"Pyelitis Complicating Pregnancy."*—E. R. Muntz, M.D., Ada. Discussion: L. G. Neal, M.D., Ponca City; Robert Akin, M.D., Oklahoma City.

12:00 Noon—*"Pneumococcic Meningitis Associated With Pregnancy."* — Julian Feild, M.D., Enid. Discussion: John Fidlar Daly, M.D., Pawhuska.

7. *Section on Dermatology and Radiology*

Tuesday, May 7, 1940

M. O. Nelson, M.D., Sponsor

Dining Room A, Mezzanine Floor, Mayo Hotel

Chairman—M. M. Wickham, M.D., Norman.

Vice-Chairman—Ralph E. Myers, M.D., Oklahoma City.

Secretary—W. S. Larrabee, M.D., Tulsa.

DERMATOLOGY

M. M. Wickham, M.D., Presiding

9:00 A.M.—*"Tinea Capitis."*—Joseph B. Hix, M.D., Altus. Discussion: Hervey A. Foerster, M.D., Oklahoma City.

9:30 A.M.—*"An Unusual Case of Leprosy in Oklahoma."* Illustrated in color.—Onis G. Hazel, M.D., Oklahoma City; and Wayne O. Hull, M. D., Oklahoma City. Discussion: Everett S. Lain, Oklahoma City.

10:00 A.M.—*"Diabetic Dermatoses."* Illustrated With Lantern Slides.—John H. Lamb, M.D., Oklahoma City; and Bert Keltz, M.D., Oklahoma City. Discussion: Carl L. Brundage, M.D., Oklahoma City.

10:30 A.M.—*"Management of Late Syphilis, With Special Reference to Neurological Syphilis."* — C. P. Bondurant, M.D., Oklahoma City. Discussion: Marque O. Nelson, M.D., Tulsa.

Election of Officers.

RADIOLOGY

Ralph E. Myers, M.D., Presiding

11:15 A.M.—*"History of Roentgenology."*—Edward H. Skinner, M.D., Kansas City, Mo.

11:45 A.M.—*"Intra-Cavitary X-Radiation."*—L. S. McAlister, M.D., Muskogee. Discussion: W. S. Larrabee, M.D., Tulsa.

12:15 P.M.—*"Early Infiltration of the Lung—Assmann Foci."*—Illustrated With Lantern Slides. Alfred J. Ackermann, M.D., Oklahoma City. (By invitation). Discussion: Ernst Lachmann, M.D., Oklahoma City.

8. *General Scientific Session*

Tuesday, May 7, 1940
W. A. Howard, M.D., Presiding
Crystal Ballroom, Sixteenth Floor, Mayo Hotel

2:00 P.M.—*"Tuberculosis and the General Practitioner."*—Horton R. Casparis, M.D., Nashville, Tenn.

2:30 P.M.—*"Diagnostic Points in Rectal Cancer."*—Curtice Rosser, M.D., Dallas, Texas.

3:00 P.M.—*"Management of Accessible Cancer of the Uterine Cervix by Radium Therapy."*—Edward H. Skinner, M.D., Kansas City, Mo.

3:30 P.M.—*"The Effect of Aminophylline on the Electrocardiogram."* — Alphonse McMahon, M.D., St. Louis, Mo.

4:00 P.M.—*"National Physicians Committee for Extension of Medical Service."*—Edward H. Skinner, M.D.

9. *Tea for Doctors and Wives*

5:00 P.M.
Junior Ballroom, Mezzanine Floor, Mayo Hotel

10. *Program General Meeting*

Tuesday, May 7, 1940
8:00 P.M.
Akdar Theatre
Open to Public
Maurice Searle, M.D., General Chairman, Presiding

Introduction of Guests — Maurice Searle, M.D., Tulsa.

Address of Welcome, Tulsa County Medical Society—Russell C. Pigford, M.D.

Address of Welcome, City of Tulsa—Mayor T. A. Penney, M.D.

Response and Introduction of President-Elect—W. A. Howard, M.D., Chelsea, Retiring President.

President's Address — Henry H. Turner, M. D., Oklahoma City.

Introduction of Alphonse McMahon, Vice-President of the American Medical Association, St. Louis, Mo. — Maurice Searle, M.D.

Address—*"The Medical Profession, Its Aims and Responsibilities."* — Alphonse McMahon, M. D.

11. *President's Reception*

10:00 P.M.
Crystal Ballroom, Sixteenth Floor, Mayo Hotel

Wednesday

May 8, 1940

1.—8:00 A.M.—House of Delegates, Crystal Ballroom, Mayo Hotel.

2.—9:00 A.M.—Section on General Surgery, Junior Ballroom, Mezzanine Floor, Mayo Hotel.

3.—9:00 A.M.—Section on General Medicine, Ivory Room, Mezzanine Floor, Mayo Hotel.

4.—9:00 A.M.—Section on Eye, Ear, Nose and Throat, English Dining Room, Mezzanine Floor, Mayo Hotel.

5.—9:00 A.M.—Section on Urology and Syphilology. Main Private Dining Room, Mezzanine Floor, Mayo Hotel.

6.—9:00 A.M.—Section on Obstetrics and Pediatrics, Room A, Sixteenth Floor, Mayo Hotel.

7.—9:00 A.M.—Tuberculosis Symposium, French Dining Room, Mezzanine Floor, Mayo Hotel.

8.—12:30 P.M.—First Annual Secretaries Luncheon, University Club.

9.—2:00 P.M.—General Scientific Session, Crystal Ballroom, Mayo Hotel.

Details of Program follow numerically.

1. *House of Delegates Meeting*

Wednesday, May 8, 1940
8:00 A.M.
Crystal Ballroom, Sixteenth Floor, Mayo Hotel

2. *Section on General Surgery*

Wednesday, May 8, 1940
T. H. West, M.D., Sponsor
Junior Ballroom, Mezzanine Floor, Mayo Hotel

9:00 A.M.—*"Recommendations in Routine Anesthesia Procedures."*—Harry B. Stewart, M.D., Tulsa. Discussion: Sanford Henry McEvoy, M.D., Enid.

9:30 A.M.—Chairman's Address—J. E. McDonald, M.D., Tulsa.

10:00 A.M.—*"A Radiologist Observes Fracture Treatment."*—Edward H. Skinner, M.D., Kansas City, Mo.

10:30 A.M.—*"The Indications, Results and Reasons for Use of the Different Types of Skin Grafts."* — Stephen S. Ellis, M.D., Oklahoma City. Discussion: Max Van Sandt, M.D., Wewoka; Roy Lee Fisher, M.D., Frederick.

11:00 A.M.—*"Intestinal Polyposis."* — Fred

A. Glass, M. D., Tulsa. Discussion: J. K. Lee, M.D., Tulsa.

11:30 A.M.—*"Management of Congenital Absence of the Vagina."*—LeRoy H. Sadler, M.D., Oklahoma City. Discussion: John F. Burton, M.D., Oklahoma City.

3. Section on General Medicine

Wednesday, May 8, 1940

Frank Nelson, M.D., Sponsor

Ivory Room, Mezzanine Floor, Mayo Hotel

9:00 A.M.—*"Undulant Fever."*—F. P. Fry, M.D., Frederick. Discussion: E. A. Gillis, M.D., Oklahoma City. (By Invitation).

9:30 A.M.—*"Thyroid Disease."* — F. S. Newman, M.D., Shattuck. Discussion: C. C. Hoke, M.D., Tulsa.

10:00 A.M.—*"The Doctor's Relation to Public Health."*—Johnny A. Blue, M.D., Guymon.

10:30 A.M.—Election of Officers.

10:45 A.M.—*"Pellagra."* — V. H. Musick, M.D., Oklahoma City. Discussion: W. J. Bryan, M.D., Tulsa.

11:15 A.M.—*"Hypertension."*—C. A. Traverse, M.D., Alva. Discussion: J. W. Francis, M.D., Perry.

11:45 A.M.—*"Thiamin Chloride, Its Indications and Methods of Use."*—T. C. Rewerts, M.D., Bartlesville. Discussion: G. S. Barber, M.D., Lawton.

4. Section on Eye, Ear, Nose and Throat

Wednesday, May 8, 1940

D. L. Edwards, M. D., Sponsor

English Dining Room, Mezzanine Floor, Mayo Hotel

9:00 A.M.—Election of Officers.

9:45 A.M.—*"Local Treatment in Allergy of the Nose."*—O. Alton Watson, M.D., Oklahoma City. Discussion: George S. Wilson, M.D., Enid.

10:30 A.M.—*"Phorias; Their Diagnosis and Treatment."*—James P. Luton, M.D., Oklahoma City. Discussion: E. S. Ferguson, M.D., Oklahoma City.

11:15 A.M.—*"Brain Tumors I've Met."*—E. H. Coachman, M.D., Muskogee. Discussion: Harry Wilkins, M.D., Oklahoma City.

5. Section on Urology and Syphilology

Wednesday, May 8, 1940

K. F. Swanson, M.D., Sponsor

Main Private Dining Room, Mezzanine Floor, Mayo Hotel

9:00 A.M.—*"Prostatic Resection: Advantages and Disadvantages."* — Basil A. Hayes, M.D., Oklahoma City.

9:45 A.M.—*"Post-Operative Management of Transurethral Resection."*—R. S. Love, M. D., Oklahoma City.

10:30 A.M.—*"Treatment of a Few Urological Conditions."*—M. H. Newman, M.D., Shattuck.

11:15 A.M.—Films: *"Transplantation Ureters;" "Orchidopexy — New Type;" "Epididymectomy."*

6. Section on Obstetrics and Pediatrics

Wednesday, May 8, 1940

James L. Miner, M.D., Sponsor

Room A, Sixteenth Floor, Mayo Hotel

9:00 A.M.—*"Children in a Democracy."*—Horton R. Casparis, M.D., Nashville, Tenn.

9:30 A.M.—*"Sinus Disease in Children."*—Clark Hall, M.D., Oklahoma City. Discussion: T. F. Gross, M.D., Lindsay; Hugh Evans, M.D., Tulsa.

10:00 A.M.—*"The Use of Sulfapyridine in the Treatment of Pneumonia in Children."* — E. M. Gullatt, M.D., Ada. Discussion: Forrest Etter, M.D., Bartlesville; C. E. Bradley, M.D., Tulsa.

10:30 A.M.—*"Intussusception — Report of Two Cases."* — John Walker, M.D., Muskogee. Discussion: Wylie G. Chesnut, M.D., Miami; A. H. Bell, M.D., Oklahoma City.

11:00 A.M.—*"Thymus Disease in Birth Palsies."* — Hugh Graham, M.D., Tulsa. Discussion: Carroll M. Pounders, M.D., Oklahoma City; T. H. McCarley, M.D., McAlester.

7. Tuberculosis Symposium

Wednesday, May 8, 1940

French Dining Room, Mezzanine Floor, Mayo Hotel

R. M. Shepard, M.D., Chairman, Tulsa

"Admission of Patients and Their Care After Dismissal." — Richard M. Burke, M.D., Superintendent State Sanatorium, Clinton.

"*Sanatorium Care.*"—F. P. Baker, M.D., Superintendent State Sanatorium, Talihina.

"*The Management of Tuberculosis Patients.*"—Floyd Moorman, M.D., Oklahoma City.

"*Early Diagnosis.*"—R. M. Shepard, M.D., Tulsa.

8. *First Annual Secretaries Luncheon*

12:30 P.M. Wednesday, May 8, 1940
University Club
Henry H. Turner, M.D.,
President Oklahoma State Medical Association, Presiding
Roundtable Discussion on Correlation of County Society Activities with the Office of the Association.

9. *General Scientific Session*

Wednesday, May 8, 1940
Crystal Ballroom, Sixteenth Floor, Mayo Hotel
Henry H. Turner, M.D., Presiding

2:00 P.M.—"*Simplified Radiation Therapy for Cancer of the Skin and Lip.*" — Edward H. Skinner, M. D., Kansas City, Mo.

2:30 P.M.—"*Emergency Treatment of Acute Heart Failure.*" — Alphonse McMahon, M.D., St. Louis, Mo.

3:00 P.M.—"*Management of Minor Anal Pathology.*" — Curtice Rosser, M.D., Dallas, Texas.

3:30 P.M.—"*The Medical Aspects of Child Behavior.*"—Horton R. Casparis, M.D., Nashville, Tenn.

4:00 P.M.—"*Group Hospital Insurance.*"—Alphonse McMahon, M.D., St. Louis, Mo.

(All papers presented before the Sections are property of the Association for publication in The Journal and should be presented to the Secretary of the Section when read.)

"Hall of Health" To Attract Crowds at Annual Meeting

The Hall of Health, educational exposition of medical science and health, is rapidly taking shape and promises to be an outstanding show of its kind during the week of May 7 to 12 in the Coliseum under the sponsorship of the Tulsa County Medical Society.

The Hall of Health Committees, headed by Dr. Paul Grosshart, have been working every day for the past three months on the details of this huge health program which is being developed along the lines of the Hall of Science expositions at the New York World's Fair and the San Francisco exposition.

The Hall of Health will be shown at the same time the Oklahoma State Medical Association holds its convention here, but will not be a part of the convention proper. The Hall of Health is an exposition designed for the public, to bring in a visual manner the story of how medical science, dentistry, public health, and allied agencies play a part in safeguarding and protecting the health of mankind.

The public is demanding to know more and more about what goes on inside their bodies in this rapidly moving age, and is primarily interested in his health which is its greatest asset and for this reason a plan has been worked out to help inform the public. The Hall of Health shows how the activities of medicine, pharmacy, nursing, hospitals and other institutions are correlated as a means of protecting and preserving the health. This show will give the individual an opportunity of actually learning about himself and will give him an insight into the proper care he should be taking of his body.

The anatomy of the human body will be visualized by the means of the famous Transparent Woman and also the "Dissectible Woman." These life-sized figures will be so shown that the public can actually study the make-up of their bodies and get some concrete idea of what their bodies are all about. These figures are illuminated internally and will be illuminated as a lecturer unfolds the physiology of man. An attempt is being made to secure the Lindbergh-Carrel Heart for the show. A special exhibit of the heart, showing actual amplification of the heart-beat, will be featured. Other special exhibits will include cancer, tuberculosis, syphilis, pneumonia, quacks, dentistry, pharmacy, X-ray, iron lungs, etc., etc.

The organization personnel of committees for the Hall of Health follow:

I. Scientific Exhibits: J. E. McDonald, chairman; B. L. Branley, E. R. Denny, R. M. Shepard.

II. Commercial Exhibits: J. F. Gorrell, chairman; R. Q. Atchley, E. L. Cohenour.

III. Special Exhibits: Paul Cameron, chairman.

IV. Publicity: T. H. Davis, chairman; G. H. Henry, M. D. Henley.

V. Ticket Sales: W. S. Larrabee, chairman; Joe Fulcher, James Stevenson.

VI. Schools: Mabel Hart, chairman; H. J. Evans, W. A. Waller.

VII. General Arrangements: H. B. Stewart, chairman; John Perry, W. A. Showman.

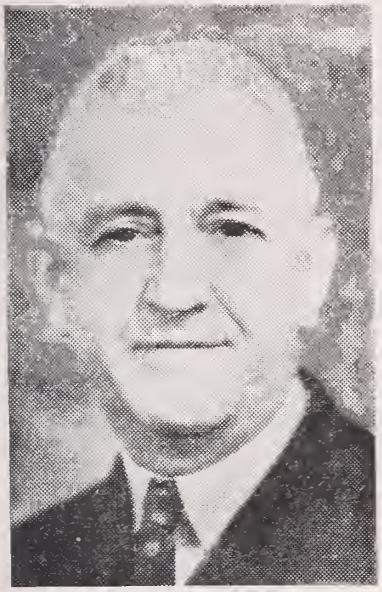
Honorary Membership

In accordance with the provisions of the By-Laws of the Oklahoma State Medical Association, the following names of members in good standing of the Oklahoma State Medical Association, which have been placed on file in the office of the Association to be acted upon for honorary membership at the Annual Meeting May 6, 7, and 8, are hereby published:

J. N. Harber, Seminole
C. R. Silverthorne, Woodward
E. F. Camp, Buffalo
A. J. Welch, McAlester
Thomas M. Boyd, Norman
Fred S. Clinton, Tulsa
Gregory A. Wall, Tulsa
J. S. Stults, Altus
J. E. Cullum, Earlsboro
J. H. Harms, Cordell
J. Paul Jones, Dill
W. T. Ray, Gould
J. E. Jones, Hollis
W. H. Kingman, Bartlesville
T. M. Aderhold, El Reno
G. P. Cherry, Mangum
Isaac S. Hunt, Freedom
E. P. Clapper, Waynoka
Elizabeth Grantham, Alva.
Albert M. Cates, Oklahoma City
George R. Tabor, Oklahoma City
A. M. Young, Jr., Oklahoma City

OFFICERS

Oklahoma State Medical Association



W. A. HOWARD, M.D.
Chelsea
President



HENRY H. TURNER, M.D.
Oklahoma City
President-Elect



L. S. WILLOUR, M.D.
McAlester
Secretary-Treasurer-Editor



J. D. OSBORN, JR., M.D.
Frederick
Speaker, House of Delegates

COMMITTEE REPORTS

In compliance with provisions of the Constitution and By-Laws, which call for publication of such matter in the issue of The Journal preceding the Annual Meeting, the committee reports are hereby published.

Report of the Crippled Children's Committee

The following report has been drawn up by the Crippled Children's Committee, and we make the following report and recommendations:

The Committee feels there is, particularly at this time, an unusual need for such a Committee to review the plan now in effect in Oklahoma for the treatment of the indigent crippled child. The work in general is well organized, and we feel that Oklahoma may well feel proud of its statewide care of the cripple. In the last fiscal year, 9,384 children under tweuty-one years of age received commitment orders to the hospitals for their crippling deformities. The Committee, however, wishes to present the following suggestions in the hope that they may be of value in improving some of the details of the present excellent system:

First, it is suggested that the Child Welfare Worker in each of the seventy-seven counties of the State should carefully prepare a social and economic status of each applicant presenting himself or herself, and that this data be available for review and consideration by the County Judge. In this way he would be in a better position to recommend hospitalization if the case warranted it. This innovation would save the County Judge some valuable time and make available much needed data that could be used in the further care of these patients.

Second, the Committee discussed the advisability of having the State Assistance Funds allocated by the State to the Counties each quarter rather than by annual appropriation. It is the feeling of this Committee that this method would enable the County Judges to more easily cope with the problems presented and permit his contact with the patient and parents to be more satisfactorily fulfilled. It is also suggested that the Judges could facilitate matters if they would budget their county funds in a similar manner.

Third, the Committee would like to call attention to the fact that the experieuce of the past has shown that the load of treatment for crippled children throughout the State has been gradually increasing since the passing of Senate Bill SL 1935. This bill stipulates that no doctor may be paid for his services from the County Crippled Children's Funds. As the majority of this work is being done in recognized hospitals over the state with remunerations for these services made to everyone except the physician, the Committee believes that consideration should be given to some workable plan whereby this defect in the law can be remedied. Such a plan should be safeguarded by being based along the lines of professional competence.

Fourth, the Committee has been conviuced of the urgent need for the establishment of an isolation building in conjunction with the work at the Crippled Children's hospital, Oklahoma City. They wish to go on record as being in favor of having our State Medical Society take some definite action in recommending the establishment of such a much-needed building. The present method of having to close a ward with its large number of patients when any infectious disease arises, is both unnecessarily costly to the State and at present delays the needed surgery to the other crippled children within that affected ward.

Lastly, the Committee reviewed the methods of handling crippled children's work in the different states, and investigated the plans now in operation. It was found that this work was being handled in four different ways; either the indigent crippled children's work was under the Educational Department of the State, under a special State Commission, such as the State of Oklahoma possesses, or under the Welfare Department or State Health Department of the individual state. The method Oklahoma has been using so satisfactorily is handled by the Oklahoma Commission for Crippled Children, and the Committee feels that this method has the combined advantage of having the work guided by an entirely non-political organization, composed of a representative or executive head of the Educational Department, the State University School of Medicine, and the State Department of Public Health. The Committee, therefore, can recommend this method of handling the problem of the crippled child in this state, for it believes that there is thereby retained a balance of power and that those groups interested in educatioual and health problems of Oklahoma are guiding its course.

Paul C. Colonna, Chairman
Pat Fite
R. B. Gibson.

Report of the Committee on Industrial Health and Traumatic Surgery

The Council ou Industrial Health of the American Medical Association was created in 1937 as a standing committee, and, since that time, has striven diligently to bring to the attention of the profession the urgent necessity of proper training and research to improve the health of the industrial worker.

During the past year, a survey was made through the Council in which your committee cooperated to gather pertinent facts on Industrial Health in order that activities in this field might be directed along proper and necessary channels.

On completiou of the survey, it was interesting to note that accidents were the fourth cause of death in the United States considering the total population; ranked second in male deaths and sixth in female fatalities. The enactment of Workman's Compensation Laws has also forced on industry and the medical professiou the realizatiou that the majority of industrial accidents and unhealthful exposures are, in the main, preventable, thus, directing a forceful challenge to both agencies.

While comparatively little progress has been made in associating the problems of Industrial Health with the problems of the general practitioner, the number of physicians devoting exclusive practice to this field have increased rapidly in number. In 1934, there were 232 physicians considering practice exclusive in this field, and, by 1938, the number had increased to 345. On the other hand, there was an increase from 870 to 1,054 during the same period giving special attention to industrial health. While this progress had been made without the stimulus of the Council on Industrial Health, the fact that since its organization thirty-four state medical associations have appointed committees to study and work in the field, eminently prophesies the interest being manifested in the work and the necessity for progressive steps to be takeu toward a complete study and educational program for both the benefit of the physician and the industrial worker. The State of Oklahoma with its diversified industry should, by all means, take cognizance of its responsibilities and the Oklahoma State Medical Association should, in the opinion of its Industrial Health aud Traumatic Surgery Committee, become the leader.

ENLIST

enlist

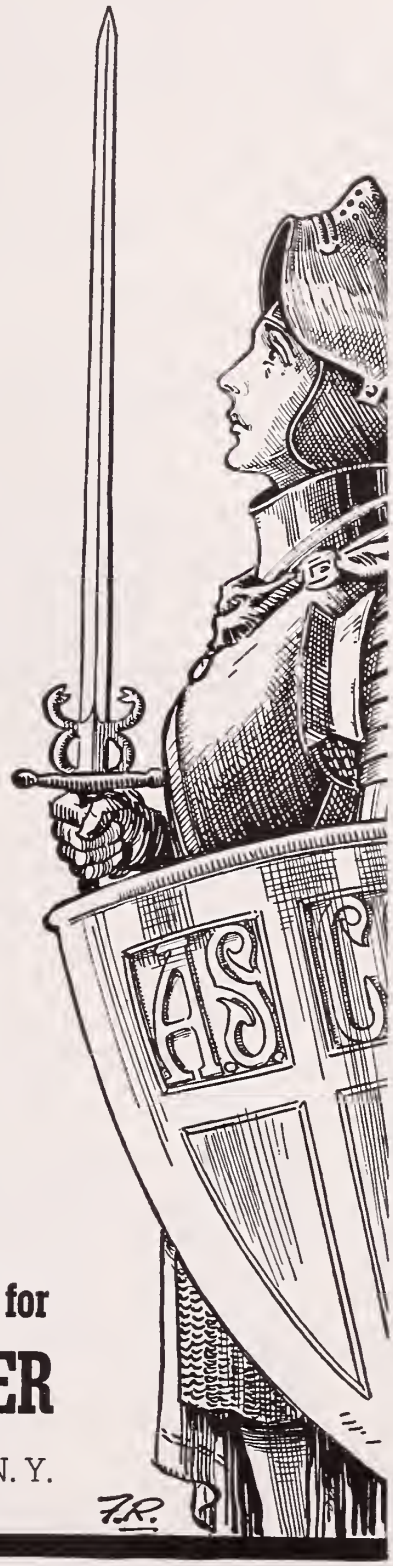
in the Women's Field Army of the American Society for the Control of Cancer, and help in the intensive war against this disease.

educate

yourself and others to recognize early symptoms that may indicate cancer.

save

some of the 150,000 who may die this year unless promptly treated. Early cancer can be cured.



JOIN YOUR LOCAL UNIT NOW!

or send your enlistment fee of $1.00 to

AMERICAN SOCIETY for the CONTROL of CANCER

350 Madison Avenue • New York, N. Y.

In order that a definite program of activities for such committees may be uniform in its composition, and, in line with the committee's suggestion that the Oklahoma State Medical Association undertake to sponsor such a program, committee respectively proposes that each county medical society appoint a committee on Industrial Health and that such committees consider following the objectives laid down by the Council on Industrial Health of the American Medical Association which are as follows:

1. Train physicians to recognize and report occupational disease.
2. Train industry and labor to the value of industrial health.
3. Elevate medical relations and standards under workmen's compensation.
4. Scrutinize all social legislation affecting industrial health.
5. Clarify relationships between industrial and private practitioners.
6. Improve relations betweeu physicians and insurance.
7. Establish working relationships with all state agencies interested in iudustrial wealth.

O. S. Somerville, Chairman
M. L. Lewis
McLain Rogers.

Report of the Committee on Maternity and Infancy

The following report is beiug submitted by the Committee on Maternity and Infancy:

The Committee has sponsored a Graduate School prepared for graduate physiciaus who cared to take a special course in Obstetrics.

The course consisted of two weeks of intensive training in the more difficult problems. The course was available to all members of the State Medical Association, and the Committee believes it will be a step forward iu lowering the maternal and fetal mortality rate in the State of Oklahoma.

Walter W. Wells, Chairman
Charles Ed White
W. A. Tolleson.

Report of the Necrology Committee

In order that the proper respect and honor shall be accorded those of the fraternity that have passed away during the past year, the Necrology Committee submits in this issue of The Journal the names of the known deceased members.

The Committee respectfully requests that it be informed at once should any additions to the list be desired.

Deceased Members
1939

Name	*Address*	*Date of Death*
McLean, Burtis W.	Jenks, Okla.	1939
Moreland, B. F.	Idabel, Okla.	January 16, 1939
Hale, Arthur E.	Alva, Okla.	January 11, 1939
Wells, John M.	Bristow, Okla.	January 25, 1939
Barker, Charles B.	Guthrie, Okla.	February 12, 1939
Bartley, J. P.	Duncan, Okla.	February 1939
Long, Ross D.	Oklahoma City	January 1939
Meredith, S. M.	Viuita, Okla.	January 1939
Nelson, J. P.	Beggs, Okla.	February 1939
Wainright, A. G.	Tulsa, Okla.	January 1939
Wells, J. M.	Bristow, Okla.	January 1939
Gill, W. W.	Enid, Okla.	March 1939
Logan, J. H.	Madill, Okla.	May 1939
Campbell, W. W.	Tulsa, Okla.	April 1939
Carmichael, J. B.	Duncan, Okla.	April 1939
Hollingsworth, J. E.	Strang, Okla.	April 1939
Bagby, E. L.	Euid, Okla.	May 1939
Shuler, James L.	Durant, Okla.	August 24, 1939
Stevens, Walter S.	Talihina, Okla.	September 11, 1939
Wallace, Virgil May	Morris, Okla.	August 22, 1939
McComb, L. A.	Tulsa, Okla.	September 2, 1939
Torrance, Loyal B.	Okmulgee, Okla.	1939
Aitken, W. A.	Enid, Okla.	October 15, 1939
DeGroot, C. E.	Muskogee, Okla.	October 26, 1939
Lightfoot, James B.	Miami, Okla.	October 5, 1939
Crawford, T. O.	Dewey, Okla.	October 20, 1939
Bilby, George N.	Alva, Okla.	November 26, 1939
McHenry, D. D.	Oklahoma City	December 28, 1939
McCabe, R. S.	Oklahoma City	July 5, 1939
Bolend, Floyd J.	Oklahoma City	Juue 22, 1939
Barker, E. O.	Guthrie, Okla.	
McNess, J. C.	Carter County	
Wm. McIlwaiu	Lone Wolf, Okla.	November 28, 1939

Report of the Tuberculosis Committee

Your Tuberculosis Committee last year coutacted the President of each County Medical Society and asked that they appoiut a Tuberculosis Committee. Tweuty counties respouded by appointing such a Committee. We then asked the chairman of each Tuberculosis Committee to put on one program on tuberculosis during the year. The object was to have more interest by the county medical societies to cooperate with the state sanatoria in the tuberculosis work, particularly in the admission and after care of tuberculous patients of the state sanatoria.

It seems there are many patients in the sanatoria that could be dismissed if the State could make provisions for their artificial pneumothorax refills, as many of these patients are financially unable to pay for this service themselves. Your committee suggests that some action be taken to ask that the State Health Department be allowed appropriation for this purpose. The superintendents of the sanatoria will cooperate in determining the number of patients to be so treated during the year and the necessary funds needed.

We further recommend that the operation and management of the State Tuberculosis Sanatoria be put back under the supervision of the State Commissioner of Health, as it is purely a state health problem and should be handled by the state health officials.

The Tuberculosis Committee has arranged a symposium on the mauagement and care of tuberculosis to be given at the State Meeting Wednesday morning, May 8, 1940, at 8:30 a. m.

R. M. Shepard, Chairman
Floyd Moorman
F. P. Baker.

Report of the Committee on Medical Education and Hospitals

Dr. W. A. Howard, President, Oklahoma State Medical Association: Mr. President, Your committee on "Medical Education and Hospitals" submits the following report:

We are agreed that a hospital is as good as its atteuding staff. The undergraduate, graduate and post-graduate medical education of the doctors who compose the hospital staff is of vital importance.

Medical education should, like law, theology and the different departments of physical science, be considered as educatiou of a special character because it deals with special problems. There are, however, certain basic principles that are common to education in general, aud these ought not to be disregarded iu connection with medical education.

As we look at it, we are more and more impressed with the inequalities of the human mind. Men are no more equal intellectually than they are physically. If this statement is true it should receive attention to the end that the individual possessing superior meutal equipment might have an opportunity, not based upon time, but upon individual, demonstrable merit and adaptability. It seems to us that in pre-medical and under-graduate study, this doctrine should be applicable in medicine just as in other fields.

An increasing amount of interest in graduate and in post-graduate medical education has been manifested in recent years. This has been due to the certification of specialists, to graduate training, and to the expansion of facilities for post-graduate education. The activities of the A. M. A. Council on Medical Education and Hospitals, the American College of Surgeons, the medical schools, the certifying boards, and various commis-

sions have defined the general objectives of both graduate and post-graduate medical education.

The purpose of graduate medical education is to provide facilities for training which will give adequate preparation for beginning practice in a special field without supervision. The purpose of post-graduate education is to make available for those already in practice opportunities for becoming familiar with those advances in knowledge which are applicable to general practice.

The doctor must keep up with advancing medical knowledge. In our social order it has been and will continue to be necessary for him to do this by individual effort and expenditure of his own funds. American Medicine and outstanding American medical men have been developed in this way. Today the quality of medical service offered to the citizens is higher in the United States than in any other country in the world.

There is no short cut to high quality in our profession. The present standard can be maintained only by unremitting effort, application, consumption of time and expenditure of necessary funds by individual doctors. As in the past, any effort to make the individual doctor's task of acquiring necessary new information, will, almost certainly, occur from cooperation between the doctors themselves. Some younger members of our profession probably do not sufficiently appreciate the effort extended by our elders in establishing some of our present medical organizations. It may be admitted that some of these organizations are open to criticism from several points of view — but they are ours — founded by, financed by, run by doctors. And to what purpose? To improve the quality of service we can render to the public! Imagine, if you can, some government agency that will function as satisfactorily in this country — to the satisfaction of the doctor and patient alike.

It is our duty to improve and support our own organizations, thereby improving ourselves.

Let us not be led to accept the attitude that our efforts are not appreciated by the public. In recent years an increasing number of laymen are beginning to realize what the American doctor stands for.

The government owes us nothing. We must continue to educate and maintain ourselves.

LeRoy D. Long, Chairman
H. Lee Farris
W. G. Husband.

Report of the Committee on Public Policy and Legislation

Your Committee on Public Policy and Legislation, during the past twelve months, has cooperated to the best of its ability with all agencies asking for its assistance. Through the facilities of the American Medical Association, progress of legislation in Congress affecting the health of the public has been followed and as great an amount of help as possible given those organizations advancing workable plans for the improvement of the health of the uation.

Since the tenure of this committee was during a time when the Legislature of the State of Oklahoma was not in session, it is needless to point out that the problems of a local nature must of necessity be left to the committee to be appointed by the president-elect.

1940-41 will, no doubt, be a crucial year in matters of public health. Panacea for the curing of suspected ills of generations are being advanced from every conceivable field. Decorum should be practiced in the endorsing or criticism of any endeavors. No longer can public sentiment be the responsibility of any one committee or association; it is, as it should be, the responsibility of every citizen interested in his or her particular field. In a very few months, representatives and senators will be elected in our state to pass laws ostensibly to improve the economic conditions of the citizens of Oklahoma. It is the duty as well as an honor for every doctor to avail himself of the undeniable right as a citizen to give of his talents and abilities into this, the most important heritage of our lives, in seeing that the best citizens are selected for these positions.

A supplementary report will be made to the House of Delegates.

Tom Lowry, Chairman
Thomas McElroy
J. A. Morrow.

Report of the Public Health Committee

Report of the Committee on Public Health is hereby submitted:

Throughout the year the Committee has acted in cooperation with the Commissioner of Health for the State of Oklahoma.

Probably one of the most effective and far-reaching works that has been done along public health lines is in the early recognition and prevention of tuberculosis and early recoguition and treatment in venereal diseases.

G. S. Baxter, Chairman
James T. Riley
W. Keiler Haynie.

Report of the Committee on Medical Defense

In submitting its report to the House of Delegates, the Medical Defense Fund Committee desires to point out one major change in the rules governing the Fund that will materially affect many members of the Association.

On February 29, the Council of the Association amended Rule 3 of the rules in such a manner as to give coverage to every member of the Association in good standing regardless of whether or not the particular member carried his own liability insurance.

Rule 3, in the past, read: "A member is not subject to coverage if he carries other liability insurance." As a result of the change, Rule 3 now reads: "All members in good standing of the Oklahoma State Medical Association may participate in the benefits of the Medical Defense Fund." This change has been published in The Journal.

During the last year, only one application for assistance from the Fund was considered by the Committee, and, in this instance, the Committee ruled that assistance was not obtainable.

On April 1, in addition to the bonds held to the account of the Medical Defense Fund, there is on hand in cash the sum of $2,257.50.

O. E. Templin, Chairman
J. S. Fulton
L. C. Kuyrkendall.

AUDIT REPORT

Subject to the action of the Council of the Oklahoma State Medical Association on February 5, 1940, the financial affairs of the Association have been audited for the CALENDAR year of 1939 and the first three months of 1940.

The audit covering the calendar year of 1939 will be published in the Journal when approved by the House of Delegates at the Annual Meeting.

The audit of the Association for the first three months of 1940 is hereby published and the complete audit of the Association for 1940 will be submitted at the Annual Meeting in 1941.

THE OKLAHOMA STATE MEDICAL ASSOCIATION
Oklahoma City, Oklahoma
BALANCE SHEET
March 31, 1940

Assets	Total	Membership Fund	Journal Fund	Medical Defense Fuud
Petty Cash Fund	10.00		10.00	
Cash in Bank	7,377.27	1,012.23	3,790.54	2,574.50
Investments:				
U. S. Treasury Bonds	5,000.00	2.000.00		3,000.00
Accrued Bond Interest	32.50	32.50		
Total Assets	12,419.77	3,044.73	3,800.54	5,574.50

Liabilities Accrued Social Security Tax				
Operating Res.	12,388.57	3,018.33	3,795.74	5,574.50

CERTIFICATE

I hereby certify that I have made an audit of the Books of Account of The Oklahoma State Medical Association, Oklahoma City, Oklahoma, and to the best of my knowledge, obtained during the examination, the foregoing Balance Sheet reflects the true financial condition of the Association at the given date.

(Signed) *Glenn R. Davis*
Certified Public Accountant
Muskogee, Oklahoma

THE OKLAHOMA STATE MEDICAL ASSOCIATION
Oklahoma City, Oklahoma
CASH RECEIPTS AND DISBURSEMENTS STATEMENT
JANUARY 1, 1940—MARCH 31, 1940

	Total	Membership Fund	Journal Fund	Medical Defense Fund
Cash Balance — January 1, 1940	3,220.60	1,578.76	3,356.36	1,443.00
RECEIPTS:				
Membership Dues (See Schedule 3)	10,343.00	9,309.00		1,034.00
Membership Penalties (See Schedule 3)	4.00	4.00		
Journal Advertising and Subscriptions	1,734.59		1,734.59	
U. S. Bond Interest	130.00	32.50		97.50
Refund — Post Graduate Committee	740.51	740.51		
Total Receipts	12,952.10	10,086.01	1,734.59	1,131.50
Total Cash to be Accounted for	16,172.70	8,507.25	5,090.95	2,574.50
DISBURSEMENTS:				
Salaries (See Schedule 5)	1,587.00	1,347.00	240.00	
Journal Printing and Mailing	960.71		960.71	
Journal Engraving	61.25		61.25	
Telephone and Telegraph	123.05	123.05		
Postage	85.00	85.00		
Office Rent	75.00	75.00		
Traveling Expense-Exec. Sec'y.	74.16	74.16		
Press Clipping Service	9.00		9.00	
Office Supplies	346.19	346.19		
Council and Delegate Expense	15.00	15.00		
Committee Expenses:				
Post Graduate	1,000.00	1,000.00		
Hospital Insurance	55.97	55.97		
Notes Paid	4,000.00	4,000.00		
Office Equipment Purchased	356.90	356.90		
Oklahoma City Chamber of Commerce Membership	25.00		25.00	
Drayage	4.30		4.30	
Refund of Membership Penalties	4.00	4.00		
Social Security Tax $28.50 less amount deducted from Employees $15.60	12.90	12.75	.15	
Total Disbursements	8,795.43	7,495.02	1,300.41	
Cash Balance — March 31, 1940	7,377.27	1,012.23	3,790.54	2,574.50

Carried in First National Bank, McAlester, Okla., as follows:

Membership Fund	3,960.69
Journal Fund	1,080.36
Bond Int. Fund	78.72
Medical Defense Fund	2,257.50
Total	7,377.27

Urged To Combat Grants-in-Aid Abuses

If the pattern of financing states by federal grants-in-aid is to become a fixed part of the distribution of medical and health services, the medical profession must continue to take a sympathetic interest in distribution methods in order to avoid, where possible, the losses and abuses always accompanying such grants, R. G. Leland, M.D., director the Bureau of Medical Economics of the American Medical Association, Chicago, declares in *The Journal* of the Association for March 23.

Pointing out the loss of local control and autonomy under such a system, he states that for the fiscal year ending June 30, 1939, the payments to states under that portion of the Social Security Act concerned with public health work totaled $7,985,119.61.

"On Jan. 1, 1939, annual appropriations for health work, in the cooperative projects alone, from local and state sources totaled $44,861,322, an increase of more than $13,000,000 in four years," he says.

"The expenditure of federal funds through grants-in-aid under the several titles of the Social Security Act for the fiscal year ended June 30, 1938, was $275,000,629.80. The amount estimated to be necessary for the year ended June 30, 1939, was $23,000,000 and for the fiscal year ending June 30, 1940, for the same purposes, $343,150,000.

"Grants-in-aid are always accompanied by some rules, regulations and standards of administration. The rules and regulations constitute a leveling process by which direction and control are centralized, local control and autonomy are lost, and each part of the country which accepts grants-in-aid funds is required to fit the same federal mold; standards are usually minimum and when applied to the distribution of medical services actually may operate as a secondary system of licensure."

Bronchoscope For Suspected Lung Cancer

Because approximately 10 per cent of all cancer deaths are due to primary cancer of the lung, a condition for which surgery now offers a good chance of survival if performed early, all suspected cases should be examined with a bronchoscope, an instrument for viewing the interior of the windpipe), Richard H. Overholt, M.D., and William Ray Rumel, M.D., Boston, declare in *The Journal of the American Medical Association.*

Such an examination should be made of all patients with a dry or productive cough, either alone or in association with fever, chest pain or discomfort, bleeding and wheezing, the two Boston doctors say.

Pointing out that cancer of the lung is 100 per cent fatal without surgical treatment, the authors report that in a group of seventeen patients who had a diseased lung removed eight are living and well with no evidence of recurrence of the cancer. They are all able to carry on the same activities in which they were engaged before the operation. Of four patients from whom a lobe of the lung was removed, three recovered from the operation and were discharged as improved.

"The numerical importance of the problem becomes apparent," the physicians observe, "when it is appreciated that approximately 15,000 people in the United States die each year from cancer originating within the lung, and approximately 150,000 persons die from cancer of all types each year. The lung is a common, rather than a rare, site for the development of a primary malignant growth."

STUDIES IN THE AVITAMINOSES

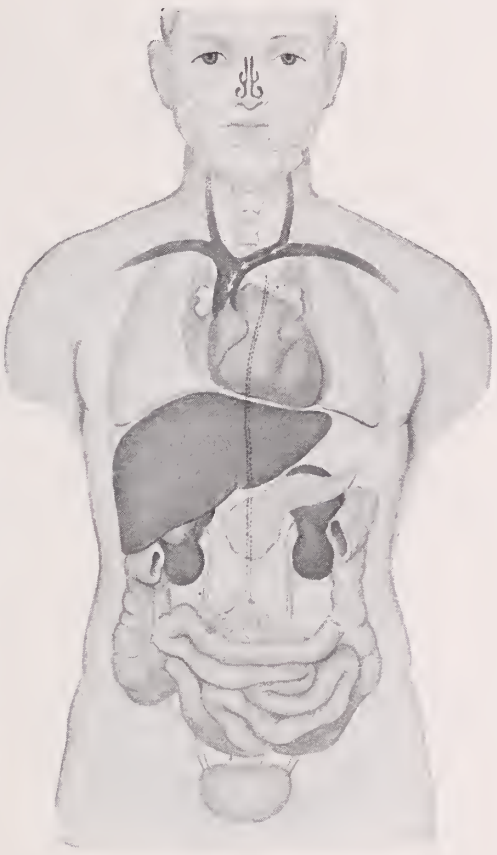


This page is the fourth of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the April 6 issue of The Journal of the American Medical Association.

Metabolic Fate of Vitamin A and Carotene

Vitamin A and carotene are absorbed into the lacteals with the fat of the food ingested. It is generally agreed that vitamin A in large quantities is more speedily absorbed than are similar quantities of carotene.

The fat-soluble vitamins enter the general circulation by way of the thoracic duct. In the liver, vitamin A and carotene are taken up by the Kupffer cells, where carotene is slowly converted to vitamin A. Experimental studies indicate that vitamin A is stored in the liver in certain species, including man.



The Causes of Vitamin A Deficiency

Vitamin A deficiency may be caused by inadequate intake of the vitamin or provitamin. Absorption may be retarded, depending on the condition of the alimentary tract. For example, mineral oil in the intestine diminishes absorption of carotene although not of vitamin A. Conversion of carotene to vitamin A in the liver may not occur, as in diabetes mellitus, where evidence indicates that the rate of transformation of carotene is diminished, and vitamin A deficiency may develop even if the diet provides the provitamin in amounts ordinarily sufficient.

Effects of Vitamin A Deficiency

Vitamin A deficiency produces pathologic changes in many organs. The process is one of alteration of epithelial surfaces — keratinizing metaplasia of the epithelium of the urinary bladder, the ureters, the ducts of the salivary glands and the pancreas, the trachea, and the nose. In the eye, vitamin A deficiency interferes with restoration of visual purple, resulting in night blindness. Prolonged vitamin A deficiency produces xerophthalmia. Administration of adequate quantities of vitamin A to patients manifesting symptoms of deficiency usually checks the progress of epithelial alteration.

UPJOHN

ASSOCIATION ACTIVITIES

Pediatrics Instructor Named By Post-Graduate Committee

The Post-Graduate Committee office has received many requests recently regarding the future of Post-Graduate Study, and physicians will be glad to know that instruction in a Pediatrics course is already under way.

The first circuit is being conducted by three instructors from St. Louis, Dr. Wayne A. Rupe, Dr. Peter G. Danis and Dr. Stanley L. Harrison. Dr. Rupe has conducted the first four weeks. Dr. Danis has just come to the state and will give two weeks of the first circuit, and Dr. Harrison the last four weeks.

On March 9, the Committee met in Oklahoma City and appointed Dr. James G. Hughes of Memphis, Tennessee as permanent instructor in Pediatrics. Dr. Hughes is eminently qualified to give post-graduate medical instruction in the subject. He is a graduate of Southwestern University in Memphis with an academic degree, and the University of Tennessee Medical School. He has had an excellent background of experience, including a rotating internship at John Gaston Hospital in Memphis, and was trained under Dr. Joseph Brennemann at Children's Memorial Hospital in Chicago, and under Dr. Edward Clay Mitchell at John Gaston Hospital.

His teaching ability is exceptional. At the University of Tennessee, he has been in charge of the out-patient department of the Department of Pediatrics at John Gaston Hospital, at the same time conducting a successful private practice. Dr. Hughes has a most pleasing personality, is energetic, and is cognizant of the problems of the general practitioner in his relationship to Pediatrics.

The second circuit will open in Southeastern Oklahoma with Dr. Hughes as instructor, and will include the teaching centers of Ada, Sulphur, Durant, Hugo, and Idabel, and will include Murray, Pontotoc, Coal, Atoka, Bryan, Choctaw, Pushmataha and McCurtain counties. This second circuit will open the week of April 29.

Dr. Hughes will be a visitor at the annual meeting of the Oklahoma State Medical Association in Tulsa, and this will give many physicians an opportunity to become personally acquainted with him.

Further details regarding the course, and the dates of Dr. Hughes' course in the various counties may be learned at the information desk which will be located near the registration booth at the State Meeting.

Obstetrics manuals will be available to a few physicians who failed to receive them and who were fully registered in the Obstetrics course, at the information desk, by merely signing for the manual and paying a small preparation charge of $1.00.

Dr. G. L. Berry of Blackwell has been elected president of the Blackwell Rotary Club. Dr. A. S. Risser has had a six year perfect attendance record in the club.

Nearly 14,000 Hear Cancer Talk During Recent Course

Speaking before a total of 13,844 laymen and physicians, Dr. J. Samuel Binkley, on March 29 completed his work as instructor for the two months' post-graduate course in cancer sponsored by the Oklahoma State Medical Association, the Women's Field Army of the American Society for the Control of Cancer, Oklahoma Division, and the State Health Department.

Originally scheduled to speak in forty centers in the state, Doctor Binkley actually appeared in forty-three cities, before 12,702 members of lay audiences, and before 1,142 at the medical meetings in the evenings. He conducted clinics in several of the cities in which doctors requested them.

Immediately following the close of the program, Doctor Binkley left for his work in New York City, where he is assistant to the head of the Chest Department of Memorial Hospital, leaving behind him proof of a highly successful campaign against cancer. Comments from state physicians received by the State Cancer Committee, and word of the interest created among laymen by the course indicate that the program was rewarded by an enthusiastic reception throughout the state.

The Oklahoma post-graduate cancer program was the first of its kind in the nation and, although actual results of course will not be known for some time, it has attracted the attention of several out-of the-state agencies which have inquired about this state's campaign.

As a follow-up to the course, and in line with its annual undertaking, the Women's Field Army, headed in the state by Mrs. W. M. Van Divort of Nowata, commander, and Mrs. E. L. Hurlock of Copan, vice-commander, is conducting this month its yearly enlistment campaign. Designed to obtain funds with which to carry on continuous education in the prevention of and necessity for early treatment of cancer, the campaign is extended into every part of the state through the efforts of local lieutenants in order to give everyone an opportunity to assist in the work.

Eighth District Societies Organize

Organization of the Northeastern Oklahoma Medical Association, incorporating county medical societies of the eighth councilor district, was effected at a meeting in Muskogee on March 21.

Representatives from all of the counties in the district attended the meeting. The new association is the first one ever organized in that particular area.

Dr. Wylie G. Chesnut of Miami is the president; Dr. Howell A. Scott of Muskogee is vice-president; and Dr. W. Jackson Sayles of Miami is secretary.

The association, which will be purely scientific, will meet three times a year. The next session is scheduled for Miami.

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Medical Fraternity Sponsors Lecture

Dr. Chauncey D. Leake, professor of pharmacology at the University of California, Berkeley, was the speaker in the first of annual lectures to be sponsored by the Phi Beta Pi fraternity of the University of Oklahoma School of Medicine, March 12 at the medical school's auditorium.

Dr. Leake spoke on "The Development of Anesthesia."

The Oklahoma City chapter announced that it would sponsor one lecture each year for the benefit of students, faculty members, physicians, and others interested in science. The date each year depends on the lecturer invited.

Is Guest Speaker For Arkansas Course

The eighth two day course of post-graduate instruction, sponsored by the state medical society and the University of Arkansas School of Medicine, Little Rock, was held at the Arkansas Medical School in late January. Among the guest speakers was Dr. Henry H. Turner of Oklahoma City, President-Elect of the Oklahoma State Medical Association, who talked on "Hypothyroidism."

Other guest speakers were Dr. Ferdinand C. Helwig of Kansas City, Mo., whose subject was "Relationship of Trauma to Tumors"; and Dr. Charles F. Geschickter of Baltimore, who lectured on "Tumors of Bones." Dr. Helwig addressed the dinner meeting on "Medicolegal Aspects of Alcoholic Intoxication." During the post-graduate course, there were nine other speakers, all of Little Rock.

Instrument Available For Owner

Dr. T. B. Felix of Holdenville has informed The Journal that a man passing through Holdenville had left at his office a blood pressure apparatus which he believes was lost or stolen. He states that the rightful owner may have the instrument by corresponding with Dr. Felix and describing the apparatus.

WHAT EVERY WOMAN DOESN'T KNOW— HOW COD LIVER OIL SHOULD BE GIVEN

"What every women doesn't know" is that psychology is more important than flavoring in persuading children to take cod liver oil. Some mothers fail to realize, so great is their own distaste for cod liver oil, that most babies will not only take the oil if properly given but will actually enjoy it. Proof of this is seen in orphanages and pediatric hospitals where cod liver oil is administered as a food in a matter of fact manner, with the result that refusals are rarely encountered.

The mother who wrinkles her nose and "makes a face" of disgust as she measures out cod liver oil is almost certain to set the pattern for similar behavior on the part of her baby.

Most babies can be taught to take the pure oil if, as Eliot points out, the mother looks on it with favor and no unpleasant associations are attached to it. If the mother herself takes some of the oil, the child is further encouraged.

The doses of cod liver oil may be followed by orange juice, but if administered at an early age, usually no vehicle is required. The oil should not be mixed with the milk or the cereal feeding unless allowance is made for the oil which clings to the bottle or the bowl.

On account of its higher potency in Vitamins A and D, Mead's Cod Liver Oil Fortified with Percomorph Liver Oil may be given in one-third the ordinary cod liver oil dosage, and is particularly desirable in cases of fat intolerance.

Pre-School Clinics In Woods County

In cooperation with the State Health Department, the County Commissioners, and the Home Demonstration clubs of Woods County, the Woods County Medical Society is conducting a series of pre-school clinics throughout the county.

The schedule, which includes twenty clinics in various localities, will extend from April 2 to May 15.

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*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.

News From The State Health Department

Physicians of Oklahoma and the Division of Vital Statistics, Oklahoma State Health department, will be interested in one phase of the 1940 census.

By using the facilities of the Census Bureau for 1940, the Division of Vital Statistics will be able to check accurately every birth in this state during the month of December, 1939, and the first three months of this year.

The physician has the responsibility for the filing of original birth certificates with the Division of Vital Statistics, a duty which is of importance to the child and his family for many reasons.

At present only 70 per cent of Oklahoma's births each year are registered, according to careful estimates of the Vital Statistics division.

In view of this fact, the "check" provided by the 1940 census taking should prove interesting, as a means of determining how incomplete this service is under ordinary circumstances.

Discussing the census bureau's check on births in Oklahoma, G. F. Mathews, M.D., Commissioner, State Health Department, pointed out that any physician who has attended a birth during December, January, February or March, and has failed to send in a registration, should do so at once.

The physician has the responsibility of filing birth certificates while the funeral director has the duty of filing death certificates. Each must be filed within 10 days, under state law. In Oklahoma, three out of every 10 births are not registered Doctor Mathews estimated.

The 1940 census will provide an accurate check on the number of births during the past four months. Each enumerator will have an "infant card," which lists a complete history for the young child.

In the meantime, the Division of Vital Statistics will prepare a transcript of all registered births during this period and send it to Washington. The census list also will be sent to Washington, and the two lists will be compared. The state will then be furnished the information on births which were not registered. The information will include the name of the physician who attended the case, it was pointed out.

Reasons for registering births are numerous and important to the individual, Doctor Mathews explained. Among the reasons for registering births he listed the following:

1. As necessary information for enrolling children in school.
2. For obtaining the first work permit.
3. For entering military service.
4. For establishing citizenship.
5. For the inheritance of property.
6. In settlement of insurance claims.
7. For obtaining social security benefits to dependent children, blind and aged.
8. As a means of gaining permission for immigration and emigration.
9. For obtaining a passport.
10. In tracing ancestry.
11. To establish the right to vote.
12. To establish the right to marry.
13. In obtaining a driver's license.

The physician sends the original birth certificate to the Division of Vital Statistics, where it is filed.

Anyone interested in a birth certificate may get a certified copy or a photostatic copy there at a charge of 50 cents, provided by state statute.

Physicians of Anadarko staged a "health picture show" on March 13, with the aid of the Oklahoma State Health Department.

A state motion picture operator brought 10 reels to Anadarko, and the physicians there had another machine and a crowd of 870 people assembled in two halls .

The operators traded pictures after a showing, keeping both groups entertained.

The pictures, taken from the health department film library, related to water supplies, tuberculosis, the common cold, safety, the value of a physical examination, medical care for the baby, the progress of public health and the organization and work of a health department.

Dr. Odis Cook of Anadarko was the physician who took the lead in sponsoring the picture shows.

The pictures are available to anyone in the state, and are being used frequently in schools, before civic clubs and similar organizations. Hugh Payne, director of health education, state health department is the person to contact about the health pictures.

Undulant or malta fever, while not emphasized, is a disease which merits the attention of Oklahoma health authorities.

Records of the Oklahoma State Health department show that in 1939 there were 372 cases reported.

During the first three months of 1940 there have been 25 cases reported.

These figures are considered far from complete by the health department, as many cases are not reported on the weekly morbidity cards provided for physicians.

For a time the morbidity reports were compiled on undulant fever from the laboratory tests, but this system has been abandoned, depending upon the reports of the physicians.

Dr. Raymond E. Mulrooney, a fellow in surgery at Mayo Clinic, Rochester, Minn., has joined the staff of the Hardy Sanitarium in Ardmore. Dr. Mulrooney is a graduate of the University of Minnesota Medical School. He is a member of Phi Chi medical fraternity and the Alumni Association or Residents and Ex-Residents of Mayo Foundation.

• *OBITUARIES* •

Dr. Darrell G. Duncan

A year's illness resulted in the death of Dr. Darrell G. Duncan, 36, March 1 in an Oklahoma City hospital. Doctor Duncan was a practicing physician in Oklahoma City for 10 years until his health failed.

Survivors include his mother, Mrs. W. B. Duncan of Ada; a sister, Mrs. Jack Johnson of Ada; and a daughter, Jo Ann of Oklahoma City. He was a graduate of the University of Oklahoma Medical School.

Funeral services were conducted in Ada March 3.

Glenwood Sanatorium

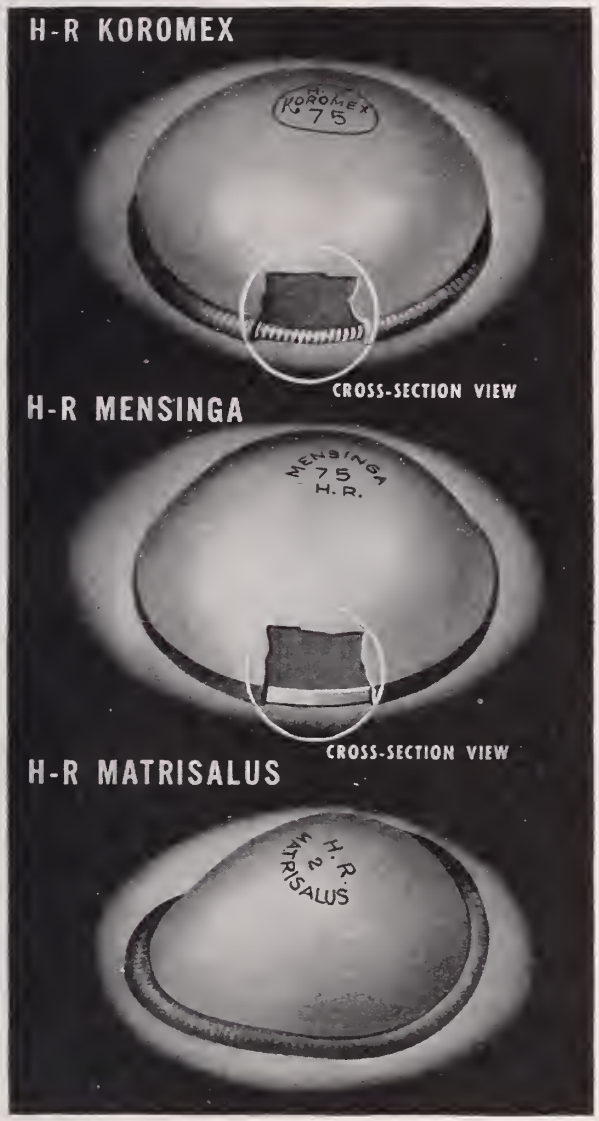
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Hearing On New Wagner Hospital Bill Summarized

"On Monday, March 18, the Subcommittee of the Committee on Education and Labor held hearings in Washington on bill S. 3230 introduced by Senator Wagner for himself and Senator George. This is the Wagner bill to make available hospital facilities for needy areas," *The Journal of the American Medical Association* says in a recent editorial summarizing the hearing. "The legislation was requested by President Roosevelt in a special message sent to Congress on his birthday.

"At the morning session Senator Wagner opened the hearing with a statement of the reasons for the introduction of this bill. He also stated definitely that he did not anticipate a report on the original Wagner bill at the present session of Congress but that he had not abandoned the bill and would expect a report at the next session. Dr. Thomas Parran, Surgeon General of the United States Public Health Service, explained the objectives of the bill and the significance of the various passages. For the American Medical Association there appeared Dr. Olin West, Secretary and General Manager, who called the attention of the committee to the platform of the American Medical Association and to the memorandum which had been left with the President of the United States by a special committee appointed by the House of Delegates, of the Association. These have previously been published in *The Journal*. Dr. R. G. Leland discussed the costs of building hospitals and costs of maintenance and indicated the necessity for a careful study of the costs of construction and maintenance in relationship to the building of such hospitals as are contemplated under this measure.

"Dr. Morris Fishbein, editor of *The Journal*, presented an analysis of the bill, indicating that section 2 of the bill does not define any time limitation whatever on the operation of the measure or indicate the possibility of incorporation of this measure in any future act. He indicated also the desirability that the National Advisory Hospital Council to be established under this measure should be given real authority, with the Surgeon General as chairman, as this measure may well be taken as a pattern for future legislation in relationship to the care of the sick. Under section 5 of the act it seemed desirable that the proposed advisory council be authorized to carry out provisions of the act, to formulate the standards, rules and regulations, review reports and inspections, and otherwise manifest actual authority rather than to act merely as an advisory body. Under section 6 of the act, the wording should be such as to limit the operation of the act exclusively to the conduct of the hospitals provided under the act, so that the act might not be used as authority for the Surgeon General of the United States Public Health Service to engage in general hospital surveys, inspection of professional services or the standards of hospitals.

"Special attention was called to part H of section 6, since the act makes no provision for disposal of the proposed hospitals should the leases be terminated by the Surgeon General. The suggestion was made that perhaps the Surgeon General should be authorized to negotiate with some other special agency for taking over the hospital, or that arrangements be made for the individual states to underwrite maintenance of such institutions, should local communities find it impossible to carry out their functions. It also seemed desirable that this section of the act forbid specifically that the federal government endeavor to man or maintain these hospitals. Attention was also called to a portion of section 7 of the act, which indicates that the Federal Works Agency be entitled to expend out of its appropriations such sums as may be necessary for the completion of these projects and without regard to specific limitations imposed on the use of the funds of the Federal Works Agency. Obviously this is a serious clause, because it removes limitations now existing on the Federal Works Agency as to the amount of money that may be spent on individual projects, and furthermore because it would permit expansion of the total sum available far beyond the actual appropriation. Thus the Federal Works Agency could provide all the costs of labor in the building of new hospitals to be constructed under this act.

"The recommendation was also made that the term 'hospital' as used in the act shall be limited to physical facilities necessary for the care of the sick rather than, as now stated, 'for the prevention, diagnosis, or treatment of disease, and for the protection of the public health.' This seems important, since there is a wide divergence of opinion as to whether or not such hospitals shall be used as headquarters for public health agencies of the county, state or other organizations to which a lease is granted or whether or not the hospital be devoted wholly to the care of the sick. Dr. W. D. Cutter of the Council on Medical Education and Hospitals, of the Association, supplied complete data regarding distribution of and need for hospitals.

"Present at the hearing were Senators Taft of Ohio, Ellender of Louisiana, LaFollette of Wisconsin, George of Georgia, Wagner of New York and the chairman, Senator Murray of Montana, and for a brief time also Senator Thomas of Utah. Senator Taft was particularly insistent in pointing out that the present measure abandons entirely the technic of grants in aid with matching appropriations. He was definitely opposed to the setting up of a chain of federal hospitals, feeling that the right to control such hospitals must rest with the individual states. Under no circumstances, he insisted, should federal institutions be permitted to interfere with nonprofit, voluntary or other private institutions. He also called attention that section of the act which creates a new principle in relationship to the use of Federal Works Agency's money and WPA workers in construction of such institutions, insisting that preference might well be given unemployed labor and recognized workers concerned with the construction industry.

"At the afternoon session appeared Dr. John Peters, Mr. Ferguson representing the Federal Works Agency, Dr. Bert Caldwell for the American Hospital Association, Rev. P. R. Zwilling for the Protestant Hospital Association, and Monsignor William F. Montazon for the Catholic Hospital Association. Abstracts of their statements will be published as they become available.

"Presumably the subcommittee will now prepare a new draft of the bill, incorporating such suggestions as were made which it thinks desirable. Just as soon as such a new draft becomes available, it will be given consideration by the Board of Trustees of the American Medical Association, and the membership of the Association will be informed as to the point of view of the Board with regard to the measure."



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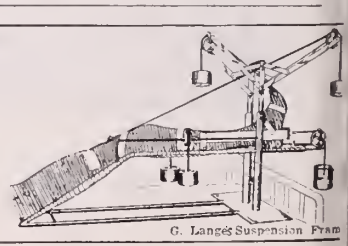
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An interesting medical corollary to the augmentation of the United States Army during 1940 and 1941 and to the planned large scale Army maneuvers during the spring and summer of 1940 is the broad medico-military experience which a great number of civilian physicians will receive. Medical Reserve officers are being used to augment the entire Army Medical Service, which includes everything from small unit installations to large Station Hospitals, General Hospitals, and hospitals designed primarily for the treatment of specific types of cases.

Physicians under 35 years of age who are desirous of obtaining extended active duty with the Army but who do not hold Reserve commissions are being offered appointments in the Medical Corps Reserve in the grade of First Lieutenant, in order to permit them to be placed on such duty. Captains and Lieutenants are at present being offered excellent assignments throughout the continental United States, and it is hoped that authority will be granted to actually permit some officers to go to Hawaii and Panama.

In addition to having a new and very busy experience in the practice of medicine, the average officer finds the pay and allowances attractive. The pay and allowances for a married First Lieutenant amount to approximately $263.00 a month: for a single First Lieutenant to approximately $225.00 a month; for a married Captain to approximately $316.00 a month; and for a single Captain to approximately $278.00 a month. In most cases the above pay and allowances would apply inasmuch as Government quarters are not usually available for officers on extended active duty. In the few instances where Government quarters are available, the amount would be $40, $60, $60, and $80 less per month respectively. In addition, the officer is reimbursed for mileage traveled from his home to his station, and upon completion of his tour of duty is reimbursed similarly for the travel to his home.

Application for one year of active duty, or for appointment in the Medical Corps Reserve with a view to obtaining one year of active duty with the Army, should be requested at once by a letter addressed to the Commanding General of the Corps Area where in the physician permanently resides. In addition, the application should contain concise information regarding permanent address, temporary address, number of dependents, earliest date available for active duty, and that internship has been (or will be) completed; and it should be accompanied by a report of physical examination recorded on the Army Form W.D. A.G.O. 63, which may be obtained from any Army station. From the group of Reserve officers placed on extended active duty since August, 1939, over 25 per cent of those within the age requirements of 32 years of age or less for commission in the Regular Army Medical Corps found military service sufficiently to their liking to cause them to take entrance examinations for the Regular Army.

Headquarters for the Corps Areas are as follows:

First Corps Area (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut) Army Base, Boston, 9, Mass.

Second Corps Area (New York, New Jersey, Delaware) Governors Island, New York.

Third Corps Area (Pennsylvania, Maryland, Virginia, District of Columbia) Post Office and Court House, Baltimore, Md.

Fourth Corps Area (North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Mississippi, Louisiana) Post Office Building, Atlanta, Ga.

Fifth Corps Area (Ohio, West Virginia, Indiana, Kentucky) Fort Hayes, Columbus, Ohio.

Sixth Corps Area (Illinois, Michigan, Wisconsin) Post Office Building, Chicago, Ill.

Seventh Corps Area (Missouri, Kansas, Arkansas, Iowa, Nebraska, Minnesota, North Dakota, South Dakota) New Federal Building, Omaha, Neb.

Eighth Corps Area (Texas, Oklahoma, Colorado, New Mexico, Arizona) Fort Sam Houston, San Antonio, Texas.

Ninth Corps Area (Washington, Oregon, Idaho, Montana, Wyoming, Utah, Nevada, California) Presidio of San Francisco, San Francisco, Cal.

Medical Division in Trade Commission

Announcement has been made of the establishment of a medical advisory division in the Federal Trade Commission in Washington to have the same status as other divisions. The director of the new unit will be Dr. Knox E. Miller, senior surgeon, U. S. Public Health Service, who has been on duty with the commission since 1938 as technical consultant to advise on medical and other claims made in advertising of foods, drugs and cosmetics.

The medical advisory division will take the place of the medical advisory section and the following personnel in the advisory section has been transferred to the division: Drs. Miller, Charles F. Church and Frederick C. Warnshuis, Miss Beatrice Ruffin and Mrs. Frances Tatum.

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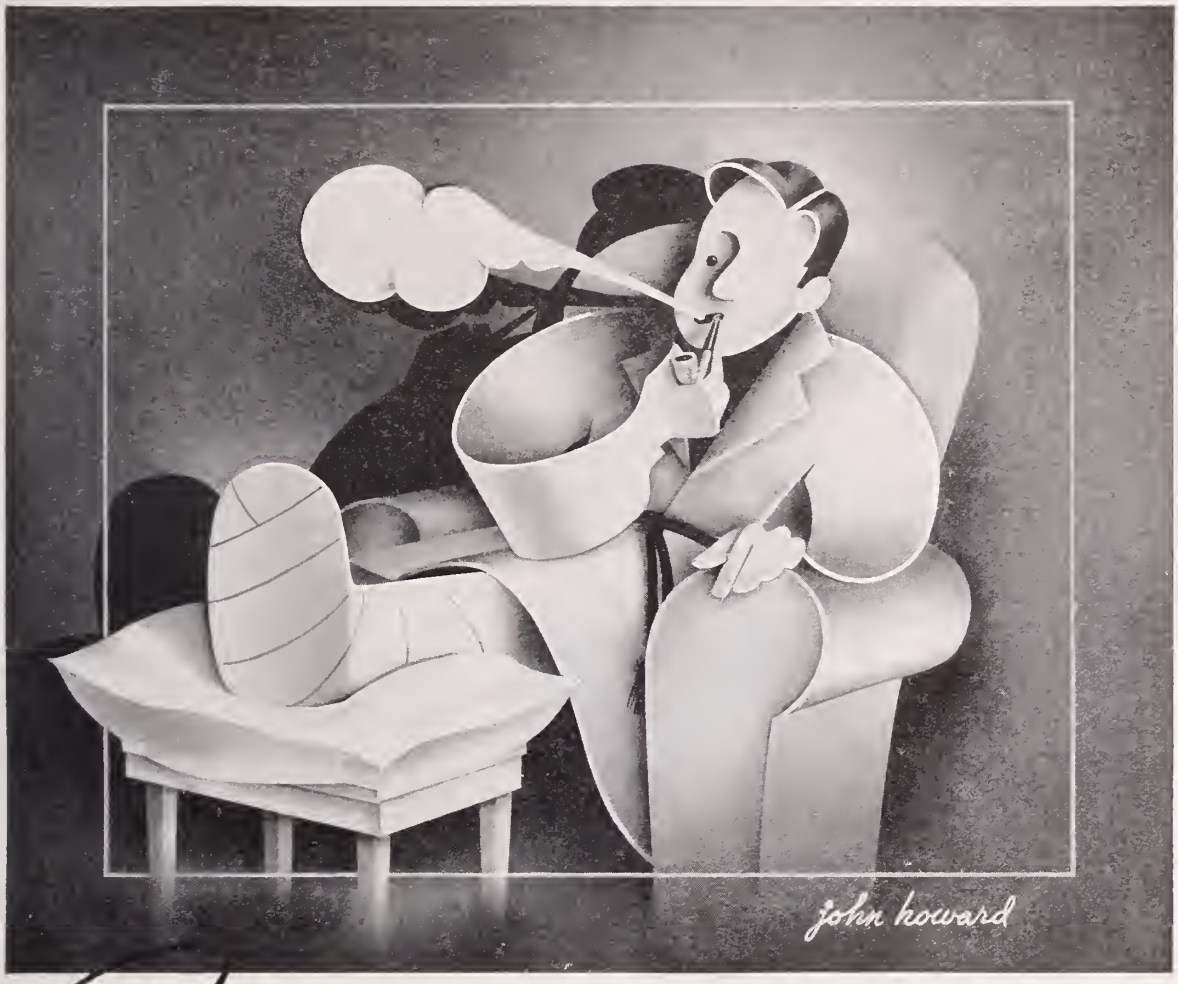
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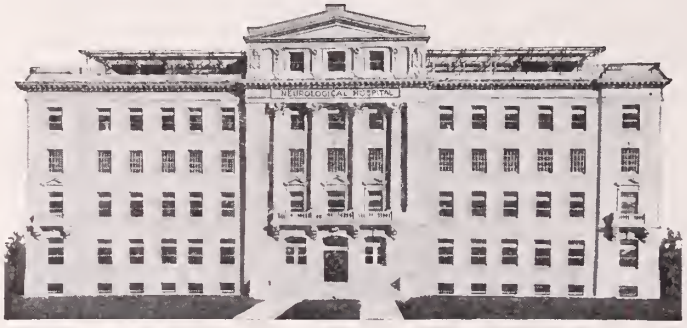
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THE JOURNAL
OF THE
OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME XXXIII OKLAHOMA CITY, OKLAHOMA, MAY, 1940 NUMBER 5

President's Address*

Members of the Oklahoma State Medical Association, distinguished guests, ladies and gentlemen: Our retiring President, Dr. W. A. Howard, has served us most efficiently, and if I can but emulate him, I shall feel that my purpose has been accomplished.

The health of the people of America is being used as a political pawn. You are perhaps aware that a vicious propaganda against the medical profession is being waged by politicians, wilfully and receptively misinformed writers, a few disgruntled physicians, and others, based upon false assumptions, incompetent and equally false surveys, half truths and upon no truth at all. You have read various newspaper articles and magazine stories, have heard radio talks and dramatizations, depicting how deplorable health conditions are in America, but failing to inform you that our people are the healthiest in the world.

All of these are incidents in a program of propaganda at discrediting American medicine and a build-up for political medicine based upon proletarian concepts. A National Health Bill was introduced in the Senate about a year ago by Senator Robert F. Wagner of New York, who is also the author of the Wagner Labor Relations Act. This health bill of the Senator's is supposed to "provide for the general welfare by enabling the several states to make more adequate provision for public health, prevention and control of disease, maternal and child health services, construction and maintenance of needed hospitals and health centers, care of the sick, disability insurance, and training of personnel; to amend the Social Security Act; and for other purposes." This act, which would authorize appropriations for certain purposes, amends certain sections and adds new sections to the Social Security Act. Without any specific declaration of the fact, it obviously offers legislation to implement the federal portion of the National Health Program.

Welfare of the public is the first requisite for a plan to improve the health of the American people. Under the present medical system, preventive medicine has reached a standard unrivaled by any country in the world. During a period of 150 years, life expectancy of an American has been expanded from 35 years to 62 years — a true test of medical service. We have no serious epidemics. Typhoid fever is easily controlled; smallpox is no longer terrifying; diphtheria is no longer a scourge. Death from tuberculosis in all forms has been reduced from 103.84 to 43.17. Shall we pay more taxes in order to retard this progress? This has been the experience of European countries having political medicine.

According to the sponsors of the plan, by the time the National Health Program has been in operation for ten years, total expenditures will amount to as much as $850,000,000 annually, which means overburdening taxes. In England over one-half of the amount of money collected by taxation for this program goes to pay for administration expense, and in Germany the number of non-medical workers is far greater than the number of physicians doing the medical work.

Two factors have delayed the enactment of the National Health Program. One is sufficient opposition, and the other is the great demand for funds. Its initiation last year would have interfered with the national defense appropriations and the more popular programs, such as Farm Security, WPA, etc. However, the President has proposed a large sum to be set aside for the building of hospitals, but here again unbiased surveys have disclosed the fact that the need is not for more hospitals except in some few instances, but better support for the existing hospitals. Statistics prove conclusively

*Delivered before the General Assembly, Oklahoma State Medical Association, May 7, 1940.

The Oklahoma Tuberculosis Society maintains clinics for the diagnosis of tuberculosis, and the physicians who devote their time to these clinics do so without pay.

The Crippled Children Society is statewide in its membership and holds a great number of clinics throughout the state each year, examining on an average of 1,000 children per annum. These children are diagnosed, and if operative procedures are necessary, they are referred to various hospitals in the State which have been approved for their care and treatment, and to date, 15,000 chlidren have been examined, and approximately 13,000 have been referred to hospitals for correction of various types of orthopedic and other surgical conditions, over a period of ten years. Hospitalization of these patients is partially paid for by a special tax levied by individual counties and by state appropriations, but the services of the physicians are without remuneration.

From a recent survey which has just been completed by the American Medical Association and which is very complete in every detail, it is estimated that American physicians donate over $1,000,000 per day in free services to the people of the United States. If this is broken down according to population, it will be found that Oklahoma's population is about 3 per cent of the United States', and it means that the medical profession of Oklahoma is giving approximately $30,000 per day in free services to the people of this State.

In Oklahoma City are the Medical School of the State University and its two teaching hospitals. Although these units are supported by the State, the appropriations made by the State for the support of the medical school and its teaching hospitals are not as great or even comparable to the return the State receives in the way of free medical service from the medical profession connected with these three institutions. Official records show that during the fiscal year ending June 30, 1937, 55,734 examinations were made in the out-patient departments of the two hospitals by members of the visiting staff. At a very conservative charge of $2.00 for each examination, this would amount to $111,468 for this volunteer, free professional service rendered to the State by the practicing physicians of Oklahoma City. During the fiscal year of 1935-36, there was a daily average of 431 patients in the University and Crippled Children's Hospitals who received an average of two visits or examinations per diem. This means 862 visits and examinations were made every day of the year to patients hospitalized in these two institutions, or 314,630 examinations and visits for the year, which if multiplied by the moderate charge of $2.00 would amount to $629,260. This added to the work performed in the out-patient department gives a total of $740,728 for the year. During the fiscal year ending June, 1937, 4,288 major and minor operations were performed in these two hospitals, including 1,700 orthopedic operations. The cost of these operations in private practice would vary from $10.00 to $500.00 per operation, according to the nature of the operation and ability of the patient to pay. If computed at even a moderate charge of $25.00, these may be conservatively estimated at a total of $107,200 annually. If these figures be added to the previous total of $740,728, we get a grand total of $847,928 as the lowest estimate that could possibly be given as the value in money of the free professional service which the state receives from the staff of these institutions. If these figures are compared with those found in the American Medical Association survey, as stated previously, at $30,000 per day, or $1,095,000 per year, it will be seen that they are quite in line. The average income of a physician in the United States has been estimated at $850.00 per year, while less than 100 physicians of Oklahoma City are donating over $800,000 in free services each year to the people of the State in these two institutions. What is true here is happening in every other city of this state, only in a smaller ratio.

I venture to say that no other group donates an amount in any way comparable to this. We are glad to do it and maintain our present status rather than become Government agents and forfeit our independence by which progress is made possible.

The medical profession of Oklahoma is constantly endeavoring to keep itself informed of the newer developments and methods of medicine by post-graduate courses which are sponsored and administered by the State Medical Association. The quality of medical service a physician renders to his community depends, to a great extent, on his knowledge of the newer and accepted methods of diagnosis, treatment, and prevention of disease. This knowledge can only be obtained by his more or less constantly familiarizing himself with current medical literature and post-graduate study. Because of financial or other circumstances related to their practice, few are able to leave it to take advantage of instruction offered in the larger centers of learning. The smaller the community and the greater its distance from teaching centers, the more isolated the physician becomes and the more urgent the need that post-graduate instruction be made available to him. Appreciating that this condition existed in rural Oklahoma to some extent, it was decided that this type of instruction should be taken directly into his own community.

The first post-graduate program was begun in 1925, under the direction of the Extension Division of the University of Oklahoma. During the following four years various courses were given in internal medicine, obstetrics, surgery, tuberculosis, urology, otolaryngology, etc. In 1929, the post-graduate program exceeded the budget set up for it by the University, and the State Medical Association then began rendering financial assistance and took a more active part in the administration of the program. Up until 1933, the physicians of Oklahoma had contributed $91,325 in fees to these programs.

In 1937, the Post-Graduate Committee of the Oklahoma State Medical Association decided to conduct a two-year program in obstetrics. An appropriation of $4,000 was requested from and granted by the State Medical Association for this work. This was supplemented by a generous contribution from the Commonwealth Fund of New York, as well as financial assistance from the Oklahoma State Health Department. The total budget was estimated at $19,500, per annum to provide for salaries for a full-time instructor, field director, and office secretary, in addition to miscellaneous expenses for supplies and equipment. During this two-year program the 77 counties of Oklahoma were covered, with a total of 805 enrollments, and an average attendance of 84 per cent. There were 1,293 private consultations made by the instructor with physicians enrolled in the course. In 178 communities 222 lay lectures were given, with a total attendance of 57,337. The course in obstetrics was concluded January 31, 1940, and a similar two-year program in post-graduate teaching of pediatrics was begun.

While the two-year programs sponsored by the State Medical Association are the most extensive, other graduate teaching is available.

Each fall the Oklahoma City Clinical Society conducts a four-day series of lectures and clinics with a faculty of sixteen teachers nationally known in their respective fields. At the last conference over 600 physicians enrolled. While the majority of these were from Oklahoma, six other states were represented. This costs the Oklahoma City doctors $1,200 to $1,500 per year.

Additional opportunity for study is offered through district medical societies, such as the Southeastern Medical Society, the Southern Counties Medical Society, and such local organizations as the Muskogee Academy of Medicine and the Tulsa Clinical Society, all of which sponsor one or two days of post-graduate work during the year.

The recently completed Cancer Program of the Oklahoma State Medical Association was in cooperation with the Women's Field Army of the American Society for the Control of Cancer and the Oklahoma Public Health Department. The course, which began February 5, was given in forty-three cities of the State. The instructor addressed in excess of 20,000 lay people on the necessity for the early diagnosis and treatment of cancer. The program was also available to every physician of the Medical Association, and an attendance of 91 per cent of the membership of the county societies was attained in the counties where a center was established. Over 20,000 pieces of literature were distributed, and addresses were given before 22 schools, aggregating approximately 8,000 students.

Results of these programs and lay lectures have been to increase the practical and ethical standards of the profession, produce a greater unity among the members and closer cooperation and understanding between the profession and the laity.

I believe it will be evident to you, from what I have presented, that the medical profession of this State is not only doing an excellent job of providing medical care for the people, but also the physicians are quite wide awake in keeping themselves well informed of all the new methods of medicine through various medical societies and post-graduate programs. Our achievements are based upon ambition and inspiration, and not on the self-satisfaction of being gainfully employed.

Perhaps devotion to scientfic improvement and technical effectiveness is responsible for failure to keep the public fully aware of the achievements and standards of American medicine. The future of medicine will be determined by the intelligence and vigor with which we combat this widesperad propaganda. We have been called poor business men and impractical idealists, an accusation with a great deal of justification. It is more important now than ever before that physicians participate in public activities and cooperate in the promotion of projects which seem to have community value. We must function as citizens in order to expect consideration from the law makers. We must have more than a superficial knowledge of the machinery of government. It is imperative that we demand from all legislators — senators and congressmen — our local representatives — their views on health legislation. If we are to survive, we must alter the viewpoint of the patient by familiarizing the public with the facts or truths. Let each and every one of us assume the responsibility of preserving the independence of American medicine.

Henry N. Turner

Renal Tumors of the Wilm's Type*

HENRY S. BROWNE, M.D.

TULSA, OKLAHOMA

The term "Wilm's tumor" is perhaps the happiest solution for a name to designate the embryonal growth that is essentially a disease of childhood, since it does not specifically name a type and there is still much argument as to the exact nature of this tumor. It is primarily an embryonal mixed growth in which one type of cell may predominate, this cell differing in other tumors.

As to the cause, various theories have been advanced—that of Wilm's being the most plausible. He believes that they arise from the renal nephrotome which is in close association with the mesenchyme, myotome and schlerotome, and, therefore, contain cells from these neighboring structures.

The embryonal tumor of the kidney is the most common type of tumor found in children, with the possible exception of tumor of the eye. Fortunately, it is a relatively rare disease and only five per cent of all renal tumors are of this type, and renal tumors are themselves uncommon. It is a disease of infants and young children, eighty per cent occurring before the seventh year and the great majority before the age of two. Both sexes are equally liable and both kidneys are equally affected. The tumor may arise from any portion of the kidney. It is encapsulated and rapidly grows to a large size. Such a rapid growth usually makes it cystic and it may be mistaken for a cystic kidney. The microscopic appearance depends on the type of embryonal cells present. Usually the picture is that of arrested renal elements with isolated tubules and atypical glomeruli surrounded by embryonal spindle cells. The tubules are lined by cylindrical or tubular cells with indistinct lumens. Muscle cells are usually present and other types of tissue, such as cartilage and bone, have been found. In spite of its rapid growth metastases occur late. They are most commonly found in the retroperitoneal glands and lungs.

The outstanding and important symptom of the Wilm's tumor is the presence of a mass in one side of the upper abdomen. This is usually discovered by the mother. Hematuria is not common, occurring in only about ten per cent of cases. Pressure symptoms, such as abdominal pain and vomiting, come late. As the growth advances, pallor, loss of weight and weakness appear.

Embryonal mixed tumors of the kidney are the most malignant of all renal neoplasms. Death usually occurs in from six to nine months after the onset. Metastases do not occur until near the end. A combination of deep x-ray therapy and nephrectomy offer the best chance of recovery. Even so, ninety per cent die.

The treatment that offers the most hope is preliminary deep x-ray therapy followed by nephrectomy. The tumors are very radiosensitive, so that the mass becomes much smaller or disappears. This makes nephrectomy much easier to perform. After surgery, more deep therapy should be given. It is only in the past few years with the great improvement in deep therapy equipment that we are beginning to be more encouraged in getting better results. However, even before the addition of x-ray therapy, surgery alone offered hope of cure.

Prather and Crabtree[1] in 1931 reported four cases: two operative—one of which was living and well fourteen months, and the other nine months, after nephrectomy. Bothe[2] well sums up our conclusions regarding the treatment of Wilm's tumor as follows:

1. The embryonal sarcomatous cells of mixed tumors of the kidney are radiosensitive.
2. The epithelial cells in mixed tumors of the kidney are radioresistant.
3. When mixed tumors of the kidney are irradiated before surgical removal the tumor is usually reduced in size.
4. The reduction in size of the tumor following irradiation appears to be dependent upon the amount of embryonal sarcomatous tissue.
5. Irradiation of the tumor does not completely destroy all of the malignant cells.

*Read before the Section on Urology and Syphilology, Annual Meeting Oklahoma State Medical Association, May 7, 1940.

6. Mixed tumors of the kidney should always have sufficient preoperative irradiation.

7. Mixed tumors of the kidney should always be removed after the irradiation. Surgical procrastination results in subsequent growth of metastases.

Priestley and Broders[3] state that preoperative irradiation followed in three to six weeks by nephrectomy and by extensive postoperative irradiation constituted the method of choice in treating these patients. Kretchmer[4] reports seven cases, in which there were five deaths later and two cases that were living after two and one-half years and three years and four months, respectively, both of these patients having had x-ray therapy and nephrectomy. He believes, therefore, in the combined treatment. McNeill, Jr. and Chilko[5] report one case from the literature and one of their own as living more than three years with deep x-ray alone and state that "while it is impossible to generalize from such a scarcity of material, in view of the appalling results obtained from other forms of treatment certainly this method is worth investigating further in the hope that we may yet stem the overwhelming tide of mortality of this dread condition."

Personally, in view of the often amazing retrogression of the tumor following irradiation, I believe that they should always be irradiated first and followed at the optimum time by nephrectomy, believing that it is far better to have the kidney out at this time of least activity of the tumor cells than to do a nephrectomy first and irridiate afterward, or as McNeill and Chilko[5] suggest, rely on radiation alone.

The following case will illustrate this point.

R. M. A.: white, female, aged 4 years 6 months, was first seen on September 12, 1939. Two days before she had been taken violently ill with fever, nausea, vomiting and pain in the left upper abdomen. On examination she appeared to be acutely ill, though well developed and nourished. There was a large smooth rounded mass occupying almost the entire left side of the abdomen. This was freely movable, rather firm and not painful. A catheterized specimen of urine was negative for pus and blood. Intravenous urography showed a normal right pyelogram with good function of the kidney. There was no excretion from the left side. The entire left side of the abdomen was filled by an opaque mass, the intestines being pushed to the right side of the abdominal cavity. She was cystoscoped under gas anesthesia and a catheter inserted to the left kidney. A retrograde pyelogram was made which showed a normal upper calyx but a filling defect of the lower two-thirds of the pelvis. The ureter was pushed across the midline to the right side of the vertebral column. A diagnosis of Wilm's tumor was made. This had grown to its present size in two months as two months previously she was examined by Dr. D. L. Garrett and no evidence of tumor was found.

She was given a series of eight deep x-ray treatments at daily intervals by Dr. Leon Stuart at St. John's Hospital and after the fourth treatment the tumor had shrunk visibly, and after a week it could not be palpated. A total of 1400R was given. She was taken to the Mayo Clinic where the diagnosis was confirmed and then returned here for operation. This was done on October 2, 1939 by Dr. Garrett and myself. Nephrectomy, with the fatty capsule adherent and undisturbed, was carried out easily. The shrunken kidney was almost as loose in its fossa as a pea in its pod. The pathological report by Dr. I. A. Nelson was as follows:

PATHOLOGY REPORT

RMA

Specimen: left kidney.

GROSS EXAMINATION (formalin fixed).

Kidney about 12x7x4 cm. with about three-fourths of the external appearance composed of a cystic tumor with surfaces somewhat yellowish with some hemorrhagic and greyish mottling. The capsule of the kidney proper is continuous over the cyst. Cross section shows a kidney structure with cortex and medulla somewhat indistinct and compressed by this cyst. The cyst contents are of a clear gelatinous nature but a portion of the cavity is composed of a very soft apparently degenerated yellowish tissue.

MICROSCOPIC EXAMINATION:

Microscopic examination shows some cloudy swelling in the parenchyma; fairly normal pelvic mucosa and some sections from amorphorous material retaining some well formed blood vessels; some loose round cell and plasma cell infiltration, but no evidence of malignancy.

DIAGNOSIS: Moderate parenchymatous nephritis. Degenerative tissue with no malignancy demonstrable.

Recovery was uneventful. A series of nine postoperative x-ray treatments were given, a total of 900 R, and on April 15, 1940 the patient was examined and found to be in excellent health with no evidence of recurrence.

In this case the clinical and urological findings were of a typical Wilm's tumor. It responded so amazingly to deep x-ray therapy that the pathologist was unable to find any active tumor cells in the removed specimen. A nephrectomy which would have been extremely difficult was rendered simple by deep therapy without the danger of rupturing the capsule and spreading the tumor.

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The Use of Vitallium Screws in Fractures of the Long Bones*

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Internal fixation of fractures in the long bones by the use of many and various forms of screws, plates, nails and bands has been used for many years with varying success. Many of you here at this meeting have at one time or another applied a Lane or Sherman plate to a bone and have noticed many times in the subsequent x-rays a dark area appearing around the screws. This dark area is bone absorption around the screws, or, in other words, the screws were loose. Thus, when the screws got loose our plate got loose which resulted in inefficient immobilization of the fracture. This, no doubt, has accounted for failure of union of the fracture following plating in a large number of our cases.

It was because of the extreme variable bone changes, and variable clinical end results of various metals that were recommended for the use in bone surgery, that inspired Drs. Venable, Stuck and Beach to undertake their experimental work of the various metals and their reaction in bone. They thought that there must be some variable factor as yet undetermined that might account for these variable clinical end results. Quoting from their original article: "Doisy in 1894 experimented with the then new metal, aluminum, and noted that it produced irritation in bone like any other foreign body. LeFort in 1918 noted that the body tissues reacted differently to bullets of varying metals. Hey Grove in 1913 thought that nickel plated steel produced no irritation in the tissues but did find that magnesium produced destruction of bone. McBride at the Southern Medical in 1937 reported his experience with a screw made of 95.7 per cent magnesium alloy metal in fracture work. Zierold in 1924 reported his experiments on dogs in which he had placed in drill holes in various bones the following metals: gold, silver, aluminum, zinc, lead, copper, nickel, steel and stellite. All of these metals showed various tissue reaction and tissue discoloration. However, he did notice that gold, aluminum and stellite were much better tolerated than the others. Silver is well tolerated in tissues and bones but its use is limited on account of its softness and weakness of the pure metal."

From our own personal experience and the experience of many other physicians, I believe we should be deeply indebted to Drs. Venable and Stuck for their thorough experimental work. The metal called vitallium is an alloy of cobalt, chromium and molybdenum. It contains no iron and shows complete resistance to body fluids and no changes were observed whatsoever in the surrounding tissues or in the bone. These authors emphasize that in some of their experiments when chromium plated screws were placed in the bone they were able later to show chromium deposits in the liver and kidneys of their dogs. Thus it would seem unwise to use any type of chromium plate or screws. I believe at present none of these are on the market but until recently they were.

There is one case on record in Tulsa where a chromium plated Smith-Petersen nail was used for a fractured hip. A few weeks later the patient began to go down hill, and only when the nail was removed did the patient recover from what later was thought to be chromium poisoning. We have already heard a lot about the electrolysis of various metals,

*Read before the Section on General Surgery, Annual Meeting, Oklahoma City, Oklahoma, May, 1939.

and by this is meant that when different metals are placed in bone, such as a vanadium plate and vitallium screws to hold the fracture, and electrical force is generated; or, in other words, a battery is formed. Just

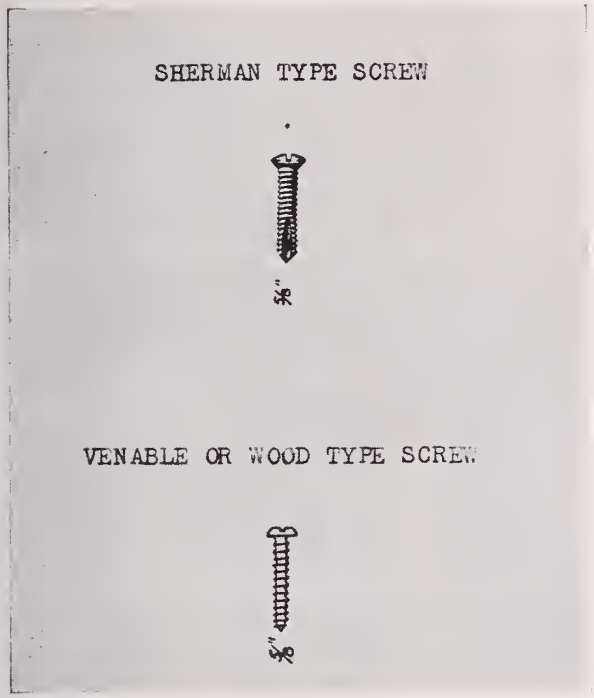


Fig. 1.

what this will prove, I am at present unable to say, because I have some well-united fractures that have been held by dissimilar metals. One thing I do know is, that I have always found bone reaction and tissue discoloration whenever I have removed an inert steel plate or pin. We have removed stainless steel nails and Smith-Petersen nails from bone and in *many* instances have found them very loose and almost ready to fall out. We have yet to see bone necrosis around the vitallium screws in our series of cases.

However, I might add that we use the vitallium screw that has the wide thread or what some people call the wood type of screw, in contrast to the Sherman vitallium screw. Fig. No. 1. The Sherman vitallium screw is similar to the old Sherman screw, in that it is the same caliber all the way down but is made of vitallium. I have been told recently that in Kansas City Dr. Frank Dickson has found that some of the Sherman type vitallium screws have become loose, where he has not found any loosening of the vitallium wood screws. Recently, we had the occasion to remove, because of an osteomyelitis, a massive onlay bone graft that had been held by vitallium screws, Fig. No. 2, and it was very interesting to study and observe that there was no discoloration of the bone graft where the screws entered, and that the screws could not be turned except with the screw driver. Gentlemen, the vitallium screws were as tight in the bone graft after eight months in the presence of infection as they were when they were put in at the time of operation. Now it has been my experience that in a similar instance other metal screws would have sloughed out long before this, just as would a piece of sequestrum.

Case I. Mr. A. C., 40 years old, fell from a horse and sustained a fracture of both bones of the left forearm on December 19, 1937. He was treated by skin traction and elevation for a period of twenty-one days. Then because the fracture had not reduced itself by this method, an open reduction was done on January 10, 1938 and a four-hole vanadium Sherman plate was put on the radius and held by four vitallium screws. The ulna was not touched. The usual customary care was used and he obtained a useful arm and solid bony union in both bones. X-ray made on January 11, 1939, shows the union with no bone absorption about the screws whatsoever.

Case II. J. D., 30 years old, sustained a fracture of both the right tibia and fibula in the middle third when a wagon bed fell on

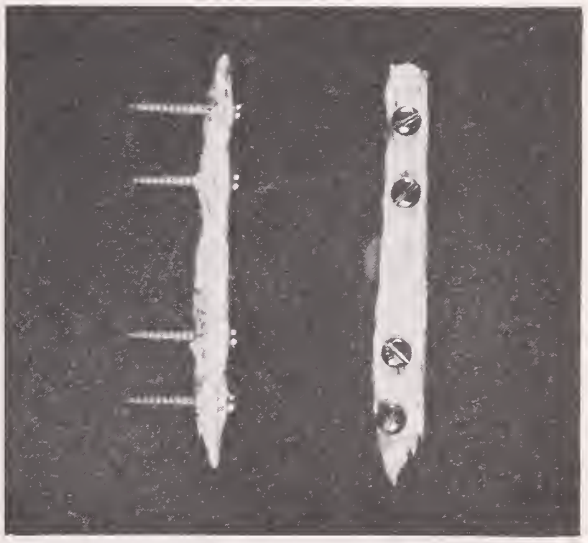


Fig. 2.—Bone graft held by vitallium screws. Graft removed because of infection. Screws in graft "could not" be turned by hand. No boney absorption about them.

him. The fracture was reduced and the leg was put in a plaster cast. At the end of six weeks there was no evidence of callus. Then I was asked to see the case and examination revealed that preturnatural mobility

was present at the fracture site. The x-ray revealed the fractures were overriding and showed no evidence of union. On April 21, 1938 the fracture site was exposed and a fibrous union was found. After freshening the end of the tibia, a four-hole Sherman vanadium plate was applied and this was held by four vitallium screws. While putting in these screws I had my first and only accident using vitallium screws. The head of a screw twisted off. X-ray made on July 31, 1938 revealed the progress of the union. The cast was removed and a walking caliper brace was applied at this time. We lost track of the case at this stage, so I do not know just how long he wore the brace. However, an x-ray taken on April 2, 1939, reveals the screws holding well and the fractures completely healed.

Case III. Mr. A. L., age 56, sustained a fracture of both bones of the left forearm in an auto accident on April 19, 1938. Closed reduction improved the fracture in the radius but the position later slipped and on April 30, 1938, an open reduction was done and a four-hole Sherman plate was put on the radius and held by four vitallium screws. The ulna was not touched. The usual plaster cast was applied, and a leather corset was later worn. Recent x-ray on March 28, 1939 reveals solid bony union of the fractures held by the plate with no bone absorption whatsoever about the screws.

Case IV. C. H., age 16, fell while playing basketball and sustained a compound fracture of both bones of the right forearm on April 21, 1938. Closed reduction was unsuccessful and on April 28, 1938, an open reduction was done, the ulna was fixed with two vitallium screws and a four-hole Sherman plate was put on the radius and held by vitallium screws. The usual plaster of paris casts were applied. The patient played football in the fall of 1938 and had no trouble whatsoever. He has normal range of motion. X-ray film made on February 10, 1939 revealed massive bone at the old fracture site with no absorption about the screws. I should like to call attention here, that we do *not* advocate open reduction or the use of foreign material in compound fractures. Sometimes one may get away with such a procedure and in this case we did.

Case V. K. D., age 18, sustained a long, spiral fracture of the femur on October 15, 1938. Fig. No. 3. Skeletal traction was used, but the position obtained was not satisfactory, so that on October 19, 1938, an open reduction was done and it was necessary to put on two Parham-Martin bands about the fracture site and at the same time two long vitallium screws were used. The usual plaster of paris spica was applied. On December 9, 1939 the cast was removed and he was advised to walk with a walking caliper brace. Union was progressing satisfactorily. X-ray on April 16, 1939 reveals the presence of callus about the fracture site. Fig. No. 4. The fracture site is still visible, however, but clinically, the fracture is solid.

Case VI. C. C., age 50, was struck by a car on November 20, 1938, sustaining a fracture of the right tibia and fibula with a puncture wound of the skin near the fracture, but the tibia was not compounded. Skeletal traction was put in his heel and this was left in place for about three weeks. The patient was none too cooperative. At the end of the three weeks period the fracture was not in a satisfactory position, so on December 30, 1938, a vitallium plate and vitallium screws were applied. X-ray made on January 31, 1939, revealed nice position of the plate with the screws holding well. He was not allowed to bear weight at this time. On April 13, 1939 x-ray reveals solid bony union in the fibula and clinically solid union in the tibia, although the x-ray reveals that the fracture site has not completely disappeared. The patient is now allowed weight bearing.



A B

Fig. 3.—Case V. K. D. (A) X-ray on admission. (B) After Skeletal traction applied. Loose fragment rotated. Open reduction done.

SUMMARY

1. Six cases are reported in which we

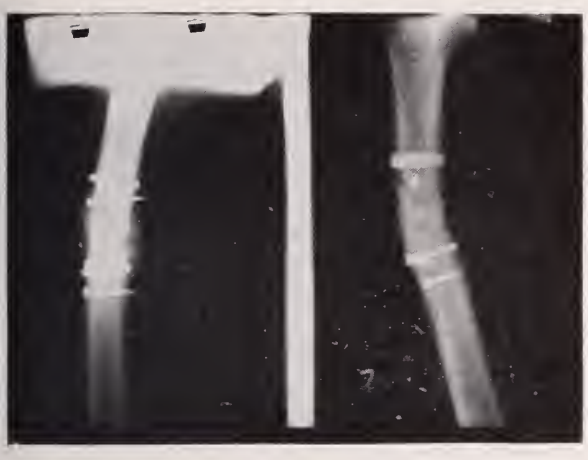


Fig. 4.—Case V. K. D. X-ray six months later. Too early weight bearing accounts for bowing in Ap. view.

have used vitallium screws. In five of the six cases dissimilar metals have been used.

2. All cases have firm bony union. Our oldest case is seventeen months and the most recent is over six months.

3. In no case have we found bone absorption about a single Venable vitallium screw.

4. We feel that vitallium is far superior to other metals when used in bone.

5. Too much credit cannot be given Drs. Venable, Stuck and Beach for their experimental work.

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DISCUSSION

D. H. O'DONOGHUE, M.D.

The Use of Vitallium Screws in Fractures of The Long Bones

Dr. Stuart has given you a very able resume of the present status of the use of vitallium in orthopedic surgery. Obviously, in the length of time at his disposal, it was impossible for him to cover in detail, all of the intricate matters of technique. I agree, heartily, with Dr. Stuart that the use of vitallium has been a very marked advance in the matter of internal fixation, in reference to orthopedic surgery. I, myself, use it practically exclusively, at the present time, whenever metal fixation is indicated. I must confess that I am considerably more prone to use internal fixation since vitallium has been available.

In our enthusiasm, however, I think we must be exteremely careful not to lose sight of the very grave responsibility resting on the surgeon who uses metallic internal fixation. It is true enough that with vitallium, we feel that we have escaped one of the major complications of internal fixation; namely, delayed bone necrosis where metal is applied. We have, however, in no way affected the more immediate complications which so often follow open operation and metal fixation. Many of you, I am sure, are familiar with Dr. Sherman's work, particularly in reference to the use of steel plates for fractures. Dr. Sherman still uses steel, and still gets beautiful results. However, we are all familiar with the many grave tragedies which have resulted from the use of metal fixation, indiscriminately following Dr. Sherman's excellent work. We have no evidence whatever that vitallium stimulates bone repair. As a matter of fact, it probably retards it, although to a lesser extent than metals formerly used. We know that the use of vitallium, in no way decreases the hazard of early postoperative infection, which is one of the major tragedies in this type of work. It is sincerely to be hoped that the popularization of vitallium will not cause to return the wave of tremendous postoperative infections which follows more or less indis-

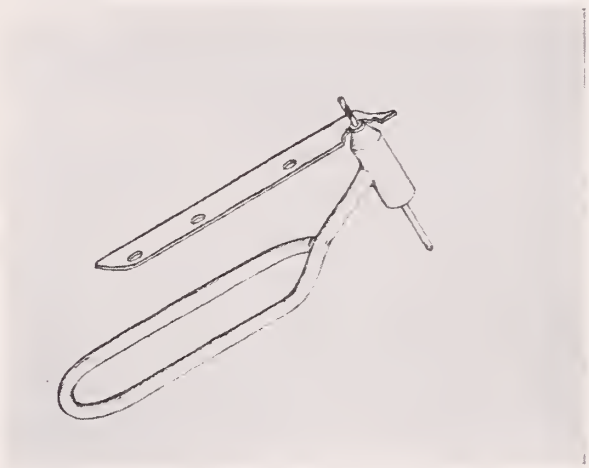


Fig. 5.—Instrument which enables us to center drill hole in the plate.

criminate use of metallic plates. Fractures can be treated only with utmost care in technique and with the very acme of asepsis.

Let me repeat, I think vitallium is a very marked advance in treatment of fractures, but let me caution against these particular things: first, the dangers of postoperative infection, following open operation of the fracture; second, the possible retardation of union by open operation, with the loss of tissue fluid, etc.; third, the deceptive ease of obtaining and holding reduction with intern-

al fixation. There must be an inhibition to open operation in cases which can be better treated by more conservative methods.

These comments are offered, of course, as an addition to Dr. Stuart's paper, rather than as a criticism of it, as I know from personal conversation that he holds the same ideas on this subject as I hold.

Dr. Stuart (in closing). I appreciate Dr. O'Donoghue's discussion and his words of caution that I failed to include. I feel that every fracture that can be treated by the closed method should be done so, and only when we fail to either reduce the fracture or hold the previously reduced fracture in proper alignment, do we advise and urge an open reduction. I exclude certain fractures as of the hip, patella, and olecranon for I believe they should always be opened up.

Some Recent Advances in Ophthalmology*

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By your election I am to give the Chairman's address, and though I have devoutly wished for that quality of inspiration possessed by the ideal teacher it seemed to me that the most useful thing I could do might be to consider in general terms the present status of ophthalmology and mention some recent advances.

It is good at times to pause on a hilltop and survey accomplishments. Thus they are often seen in a broader perspective; they frequently furnish valuable lessons, sometimes supply suggestions for further progress and often spur us on with renewed faith and hope.

Duke-Elder has said, "Like a well placed capitol city, ophthalmology forms the meeting place of many diverse interests and in its market place many tongues are spoken. The dominant language is that of the physician and the surgeon, and after these come the pathologist and the bacteriologist; everywhere is to be seen the optical physicist, and infiltrating the crowd, and becoming more important and indispensable as time goes on, are the biochemist, the physiologist, the neurologist and the psychologist."

All aspects of ophthalmology are advancing. In 1881 Sir William Bowman said, "The particular portion of the medical art with which we ourselves are concerned has grown of recent years to be so large and of such copious and diverse promise, and to present itself under so many natural subdivisions."

Two years ago (1938) Duke-Elder said, "Ophthalmology has become complicated out of all recognition and enriched by many harvests garnered by the ophthalmoscope, the microscope, and the culture medium of the bacteriologist; but it is again, I think, undergoing a revolution — a revolution less spectacular and dramatic than the previous one because we are delving much more deeply into more subtle, more fundamental, and more difficult things. Hitherto we have been dealing grossly with cause and effect, and have busied ourselves with the structural ruins which disease has left behind; now we are probing more deeply to try to determine the more subtle nature of the initial defect, to pass from the study of structures composed of molecules or atoms, to look beyond anatomy and pathology to biophysics and biochemistry."

An unsolved fundamental problem in ophthalmology is the nature of the intraocular fluids, the control of intraocular pressure, and the mechanism of glaucoma. According to the methods of investigation the aqueous has been considered a filtrate, a secretion, a dialysate. And now by more accurate methods it is found to have a higher osmotic pressure than the blood, cannot be considered a simple dialysate, and will require further investigation.

The prevention of cataract development is still not understood, but studies are going on.

Our knowledge of vitamins is almost daily advancing. Vitamin A plays an important part in metabolism of epithelial tissues. Its deficiency causes xerophthalmia and keratomalacia, and its value may be considerable in treating corneal ulcers. It is important in regeneration of visual purple and its deficiency leads to night blindness. Presence of

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large quantities of carotin, the precursor of Vitamin A, in the pigment epithelium suggests the possible influence of this layer on the function of the retina. Keratoconus has been experimentally produced in the rat by Vitamin A deficiency.

Vitamin B1, thiamin chlorid, is of definite benefit in the treatment of optic neuritis, even the toxic amblyopia thought to be due to alcohol and tobacco. Vitamin B2, Riboflavin, appears to promise definite aid in the treatment of Keratitis. Deficiency of Vitamins C and B2 may be factors in cataract development. Vitamin D is the growth vitamin and has some value in myopia in children and Vitamin K is thought to be useful in some cases of hemorrhagic retinitis.

In the field of chemo-therapy we now have sulfanilamide which is so eminently successful in trachoma and gonorrheal conjunctivitis. In other words for them we now have a "magic bullet." In fact with sulfanilamide it is thought that trachoma can be eradicated from America in one generation.

Thanks to Lawrence Post, we must not forget the group of patients with headaches apparently related to the eyes not relieved by careful correction of refraction who have a relatively low minus Basal Metabolic Rate and are relieved by administration of thyroid.

Heparin offers much promise in thrombosis of the central retinal vein but at present its high price makes its use almost prohibitive.

Castroviejo and others have given us a practical technic for keratoplasty or transplantation of corneal tissue with which is obtained practically 100 per cent "takes," but only about 20 per cent of the transplanted corneas remain clear.

Thanks to the work inspired by Gonin, the operation for retinal detachment now is successful in 30 to 50 per cent of cases, while previously the treatment of retinal detachment was hopeless. This low percentage is still a challenge to the ophthalmic surgeon for he is accustomed to a very high percentage of success. Yet we must consider the nature of retinal detachment and that its prevention involves heredity and eugenics in addition to hygiene.

Stokes has given us a practical logical physiological operation for dacryocystorhinostomy. Dimitry has given us the simplest procedure for such an operation but it appears that it would be more likely to be complicated by granulations than Stokes' procedure.

I wish to mention the increased safety of cataract operations afforded by retro-bulbar anesthesia, akinesia and the sutured conjunctival flap.

Orthoptics are becoming more practical due to improved methods.

Perimetry including scotometry in every day practice has often been neglected chiefly because its study with its crude equipment consumes so much time and patience. Yet its value in early diagnosis and in the promotion of safety with airplanes and automobiles deserves more attention.

In the field of optics we are grateful for the crossed cylinder, the streak retinoscope, aneiseoconic lenses, contact lenses and telescopic spectacles.

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A Resume of the Advance Made in the Treatment of Human Pellagra*

With Observation Made on 50 Cases Treated With Nicotinic Acid and Whole Yeast Compounds*

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A brief resume of experimental concepts, clinical observations and facts known about vitamin B and its deficiency states, seems fitting and necessary at this time, to fully appreciate the results observed in treating human pellagra with nicotinic acid.

*Read before the Section on General Medicine, Annual Meeting Oklahoma State Medical Association, May 8, 1940.

[Continued in no. 6, p. 18]

HISTORY OF PELLAGRA

To Gaspar Casal of Spain in 1735, goes the honor of describing pellagra as a morbid enity. His work was published in 1762 in which he called the disease "mal de la rosa." He stated, "A peculiar disease consisting of a combination of scurvy and leprosy." (1) Antonio Pujati (2) in 1755 taught and de-

scribed and called it "Alpine scurvy." Frapolli (3) in 1771 named it "Pellagra" meaning rough skin. Babcock and Gray each reported a case in the United States in 1834 and 1864 respectively. From this point on many cases were reported, chiefly, from the southern portion of the United States and the Mediterranean basin. Grimm reported 323 cases in 1912.

ETIOLOGICAL HISTORY

The disease was early prevalent around the Mediterranean Sea, and apparently ran in epidemics, changing its abode from one country to another with apparently no change in the country's economic status. I am informed in 1912 in Italy, where it had previously been present in epidemic form, that the country was almost free of the disease at that time. The same circumstance occurred in Egypt. In the southern portion of the United States, one sees this same periodicity in observing the disease from year to year. Thus, it has been very difficult to work out its etiology. Nelson (4) states, "every disease-producing agency conceivable" has been offered as the etiological factor. However, food deficiency has held an important place for over two hundred years. The "Maize" theory held by Lombrosa (5) was almost universally accepted. In 1905 Sanbon (6) thought the disease was disseminated by the buffalo knat. Allessandrini and Scala (7) felt that the disease was due to the action of silicon in collodial form, which was present in drinking water. Roberts (8) said that pellagra was transmitted by the mosquito, while Jennings and King (9) concluded that it was carried by the stable fly. Goldberger working through the United States Public Health Service, conducted a series of experiments in prisons, orphanages, insane asylums and hospitals and was able to stop epidemics noted here, by feeding a diet high in meats, eggs, green vegetables, fruits and legumes. At a Mississippi penal farm, Goldberger and Wheeler (10) restricted a diet of 11 male convicts, six of whom developed pellagra in six months. They also noted that women between 20 and 40 years of age were most frequently affected, that it was three times more prevalent in women than in men. Grimm (11) observed that 15 per cent of pellagra occurred in the first 15 years of life.

Funk in 1911-12-13, stated that his II factor C6H5O2 N was nicotinic acid which was isolated from rice polishings and yeast. It had by itself no therapeutic action in treating polyneuritic pigeons but did augment the actions of the other fractions. His I fraction from yeast caused improvement in polyneuritic birds, while the I and II fractions cured them readily, thus showing that nicotinic acid or II greatly augmented the action of I. When all three fractions were added even greater improvement was noted. This work was later confirmed by Szymanska and Funk and Casimar Funk. In 1918, Goldberger, Wheeler and Sydensticker, (12) after considerable experimentation, declared that pellagra as the disease is known, was a fusion of two closely related syndromes with possibly two separate factors as the cause.

Other observers working in different parts of the world have described certain types of pellagra, the symptomatology of which does not fulfill the requirements for an accurate diagnosis, of the pellagra we see in the southern part of the United States. Some of these observers found the dermatitis and glossitis without the mental changes, while others described atypical types of dermatitis, not identical with our pellagra.

Goldberger and Tanner (13) first introduced yeast in the treatment of pellagra and set the curative dosage. In 1930 Goldberger, Joseph and Sebrell (14) used liver extract to cure black tongue in dogs. The treatment of human pellagra with liver extract was done in 1933 by Ramsdell and Magness. (15) Spies, Payne and Chinn (16) proved that the PP factor of Goldberger was not the same as the intrinsic factor of Castle in pernicious anemia. This work was of importance because of the close clinical relationship between the macrocytic anaemias and pellagra. Both diseases at times, seem to be inseparable, especially those so called "pellagra sine pellagra." Some of these cases have the stomatitis, glossitis, macrocytic anaemias, with neurological changes which are indistinguishable from pernicious anemia, unless a very close analytical study is made.

Elvehjem, Madden, Strong and Wooley (17) in September, 1937, reported that nicotinic acid would cure black tongue in dogs. Street and Cowgill (18) confirmed these findings while Chick, Macrae and Martin (19) cured black tongue in swine. Sebrell Onstott, Fraser and Daft (20) found that 6 mg. of nicotinic acid twice a week would prevent the disease in dogs on a pellagra producing diet. Spies, Cooper and Blankenhorn (21) treated four cases of human pellagra while Fouts, Holmer, Lopovsky and Jukes (22) reported that 500 mg. of nicotinic acid was not as good as liver filtrate. Harris (23) reported improvement in five cases treated with nicotinic acid. Spies again recommended that the patient be given a well balanced diet with nicotinic acid. Smith, Ruffin and Smith, (24) added a case, and suggested nicotinic acid in drinking water as a pellagra preventing caution. Sebrell and Onstott (25) found that dogs, on a black tongue producing diet while taking nicotinic acid will die if ribro-flavin is absent.

One or two other notations should be made which may be of some value. Chittenden and Underhill (26) produced black tongue in dogs on a diet containing an abundance of meat and yeast. Both of these foods will cure the Goldberger type of black tongue. David T. Smith Persons and Harvey believe the Underhill Mendel type of black tongue was probably due to vitamin A deficiency.

COMPONENTS OF VITAMIN B

The most recent developments in the isolation and synthesizing of the component parts of vitamin B have thrown great light on the subject as a whole. Vitamin B1 crystals were isolated by Windaus in 1931. Jansen and Donath; (27) Peters, (28) Odake; and van Veen isolated B1 from baker's yeast and rice polishings. In 1936 it was synthesized by Williams and Cline. A lack of B1 in man produces beriberi, ocular disorders, nausea, retards growth, produces polyenritis and vascular phenomenon. A normal sized man excretes normally in his urine 12 to 35 international units of vitamin B1 in twenty-four hours.

Flavin is the water-soluble and heat-stable yellow pigment occurring in foods. It was synthesized by Stern and Kuhn (1934). It is thought by some to aid the enzymatic or harmonic activitiy of the cell and has some function in cell respiration. Fullers' earth will absorb it from an acid medium, and it can be destroyed by the blue violet portion of light and by alkalies. Very little is known of its specific function in the human organism. In the rat and dog, a deficiency of flavin causes loss of weight and retards growth.

Vitamin B3 is an unknown factor probably present in the B complex. Williams and Waterman (29) believe that it is a necessary vitamin to supplement vitamin B1, while Musser (30) states that it is a portion of vitamin B1. Vitamin B3 may also be Jukes' (31) factor or filtrate factor (the antidermatitis factor of chicks). It is not nicotinic acid for Dam (32) did not prevent chick dermatitis on a deficiency diet which contained an abundance of nicotinic acid.

Vitamin B4 is made up, chiefly, of adenine hydrochloride. Some workers believe that B4 assists B1 in the prevention of beriberi while others believe that it assists Goldberger's PP factor in preventing pellagra. Gyorgy (1935) (33) states the B4 is the antiparalytic vitamin while Elvehjem (34) believes that it is the same as the chick antiparalytic factor and that it has something to do with nutrition in humans.

Vitamin B5 has not been isolated. It has been thought by some that B3 and B5 prevents pellagra in chickens.

In a recent personal correspondence, (June 3, 1938), Paul Gyorgy makes the following statement in regard to vitamin B6. "Unquestionably vitamin B6 is a base, which in foodstuffs is apparently attached to the protein as a prosthetic group. The free base is readily soluble in water, alcohol and in an alcohol-ether mixture 1:20. The hydrochloride with the empirical formula C8 H12 Na 3 C1 (melting point 206 to 208 degrees) is sparingly soluble in alcohol and almost insoluble in acetone. Both the free base and the hydrochloride can be purified by sublimation. In rats fed a vitamin B complex free diet supplemented with B1 and riboflavin, complete recovery can be obtained only by the combined addition of vitamin B6 and the so-called filtrate factor." It is probably the Y factor of Chick and prevents dermatitis in rats. Its relation to the human organism has not as yet been determined but its presence will not prevent pellagra in man.

The PP factor of Goldberger is probably nicotinic Acid (C6 H5 O2 N) or pyridine carboxylic acid.

A TEST FOR PELLAGRA

It has been recently brought to our attention that porphyrin is excreted in the urine in abnormal amounts in pellagra (36) (37). The exact metabolism of this group of chemicals is not fully understood, but it is thought that by uniting with iron and a protein, protoporphyrin type 3 is an intermediary in the formation of hemologin and myoglobin. Coproporphyrin 3 is an abnormal product excreted in pellagra and is believed to be a sensitizing agent.

It has been found by Spies (38) and Sosaki that the administration of nicotinic acid diminishes the amount of porophyrin in the urine; that the porophyrin in pellagrous patients, is not excreted in the amounts parallel to the severity of the pellagra.

RESULTS OF NICOTINIC THERAPY

In the American Journal of Digestive Diseases, February, 1939, I reported the results of treatment with nicotinic acid on ten cases of pellagra. The following conclusions were drawn:

First: Nicotinic Acid 50 mg. to 500 mg. per day is specific in curing the acute dermatitis and glossitis of the Goldberger type of pellagra.

Second: Prolonged use of 150 mg. to 500 mg. of Nicotinic Acid a day will cure the chronic dermatitis with abrasion and chronic glossitis of typical pellagra.

Third: Nicotinic Acid in doses up to 500 mg. will partially control the diarrhea of pellagra.

Fourth: Nicotinic Acid from 50 mg. to 500 mg. a day is of very little aid in the treatment of the neuritis and neuresthenia

associated with pellagra in humans, except those of acute delirium.

Fifth: The general health of the pellagrous patient is only slightly enhanced by treatment with nicotinic acid (50 to 500 mg. per day).

Sixth: There is probably another factor or factors, other than nicotinic acid, which is necessary to completely cure the human pellagrous patient.

It was thought that by giving nicotinic acid and Whole Yeast Compounds further improvement might be obtained. Having reviewed 50 cases treated over a period of from two to six months on the above mentioned combination, it was observed that the addition of therapeutic doses of Whole Yeast Compounds did not enhance the values secured by nicotinic acid alone.

A few cases were observed on therapeutic doses of Nicotinic Acid, Whole Yeast Compounds and Cod Liver Oil and orange juice without improving the general health above that secured with nicotinic acid.

Conclusions drawn from this fact lead to the following hypothesis:

First: The other factor or factors necessary to completely cure pellagrous patients, are not found in sufficient amounts in the commonly known Whole Yeast Compounds, to warrant their use as an adjunct to nicotinic acid therapy.

Second: Whole Yeast Compounds may not contain the factor necessary to enhance nicotinic acid therapy.

Third: The curative factor other than nicotinic acid may not be a vitamin.

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Anaesthesia and Analgesia in Obstetrics and Its Relation to Asphyxia Neonatorum*

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There may be at the present a few extremists who feel that woman is meant to suffer the pangs of labor, but the majority of us feel that it is our duty to furnish both anesthesia and analgesia in some form during the painful stages of labor. Chief among the factors which have shaped the development of analgesia and anesthesia in labor is the fact that labor is a variable period which may properly extend from a few minutes to 24 hours or even longer, being in this respect totally different from the requirements in ordinary surgical procedure. The ultimate fate of the present methods may well hinge on the price the infant must pay for the mother's comfort.

We must express our results and expectations in terms of a norm, and to understand the effects of a drug we must have a knowledge of normal physiology. The animal, and we believe, the human fetus makes rhythmical respiratory movements in utero (1). When the fetus is removed from the fluid medium, the established respiratory rate continues and the animal "breathes and develops quite normally" (2). This theory as to how respiration is brought about is far different from the older theories of mechanical, chemical, or physical stimulation. The normal fetus exists in utero with a low oxygen content in its blood and in a constant state of cyanosis. Due to impairment of placental circulation by retraction of the placenta at birth the oxygen content of the infant's blood is again reduced. Cyanosis must be considered the normal state for an infant at delivery and becomes pathological only if unduly prolonged.

ABNORMAL PHYSIOLOGY

Factors which may produce abnormal physiology of the fetus and the newborn are numerous, and in considering the results of the drugs used, we must eliminate, control, or at least take these into consideration in our reports.

Influencing factors may be grossly divided into (a) those of the infant; and (b) those of the mother.

a. Infant
 1. Abnormalities of body and organs
 2. Pre- or post-maturity
 3. Position: referring to the infant in relation to pelvis
 4. Diseases in utero; i. e. syphilis

b. Mother
 1. Abnormalities of body, especially pelvis or organs
 2. Diseases of mother during pregnancy or at time of delivery

CHOICE OF DRUGS

The drugs most commonly used at present are ether, chloroform, nitrous oxide-oxygen, barbiturates quinine and opium derivitives. All of the above drugs when administered in doses of sufficient amount to the pregnant animal will retard and at times arrest the respiratory movement of the fetus in utero. (1). The most complete report given in recent years on the effects of the abovementioned drugs on the newborn infant is one by Clifford and Irving. (3) They report on 463 cases of normally delivered, full term, vertex presentation infants.

TABLE I

Comparison of Morphine, Pantopon and Barbiturate Anesthesia (3)

	Morphine 25 Cases Pontopon 75 Cases	Barbiturate 260 Cases
Complete maternal amnesia	34%	78%
Deaths in this series	2	0
Artificial resuscitation required	23%	3%
Infants physiologically normal at birth	43%	63%
Does a definite relation exist between time of medication and condition of infant?	Yes	No
Does a definite relation exist between size of dose and condition of infant	Yes	No

In their statistical comparison they conclude (1) in the case of morphine and pantopon a definite relation exists between the time interval from medication to birth and

*Read before the Section on Pediatrics and Obstetrics, Annual Meeting, Oklahoma State Medical Association, May 2, 1939, Oklahoma City.

the number of physiologically abnormal infants at delivery. Medication given to the mother less than 2 hours before birth is associated with some degree of abnormality in 47 per cent of the infants. This figure increases to a peak of 79 per cent abnormality in the group receiving medication 4 to 6 hours prior to the time of birth and then falls to 33 per cent when the time interval becames 8 hours or more.

The only two deaths encountered in 410 cases comprising this study occurred in the 75 receiving pantopon. From an earlier study by Clifford it was found that the premature infants of mothers receiving morphine within 4 hours of delivery encountered twice the deaths of infants whose mothers had not received the drug. It was also shown that the death rate increased as the size of the maternal dose increased. In the light of these facts the use of morphine or pantopon as a method of obstetrical analgesia would appear to be not only unsatisfactory for the mother but dangerous to the infant. In comparing the use of opiates and barbiturates the outstanding feature is that in the use of barbiturates a definite relation does not exist between time of medication and condition of infant and no relation exists between the size of the dose and condition of the infant.

Analgesia Versus No Analgesia

Clifford and Irving (3) in their report give a comparison of 53 cases delivered without analgesia and 260 cases delivered under the combination of pentobarbital-scopolamine-rectal ether-nitrous oxide oxygen ether.

TABLE II

Analgesia versus no Analgesia

	No Analgesia	Pentobarbital-scopolamine-rectal ether-nitrous oxide oxygen analgesia
Maternal amnesia	0	84%
Fetal mortality	0	0
Neonatal mortality	0	0
Infants Physiologically normal	73%	62%
Infants artifically resuscitated	0	2%
Infants abnormally cyanotic	23%	21%
Minutes to first breath	1.0	1.0
Minutes to first cry	1.6	4.7

In this comparison we should note that 2 per cent of the group receiving analgesia needed artificial resuscitation and none in the No Analgesia group. Also worthy of consideration is the comparison of 1.6 minute to first cry in the No Analgesia group compared with 4.7 minutes in the Analgesia group.

When I first started the practice of medicine I tried to apply my hospital training to home deliveries. I first used a combination of morphine-scopolamine rectal-ether and drop ether. The rectal-ether was very unsatisfactory because a large percentage of the mothers would not retain the fluid. Morphine was soon omitted for it was quite evident that labor was markedly retarded and the drug was producing some asphyxia in the infant. Scopolamine was found undesirable because in a large per cent of the cases it produced delirium of the mother and very little cooperation resulted. Chloroform was soon found to be preferable to ether because (a) it is not inflammable; (b) it is not objectionable to inhale; (c) its effects are rapid and the amount of desirable anesthesia can be readily obtained. In complicated cases the use of ether has been continued because of the large margin of safety over chloroform when its administration must be placed in the hands of an inexperienced person.

In my last 293 home deliveries I have used a combination of pentobarbital-sodium as a basic analgesia and chloroform or ether in the last stages. The pentobarbital-sodium was used in dosages of 3-6 grains, depending on the stage of labor and the duration. In this series of cases I have had no maternal mortalities and of the seven fetal deaths none could be attributed to the drugs used. I have been able to get cooperation from the mother, which is a very great advantage. In only four cases was it necessary to resort to any kind of artificial resuscitation. One outstanding observation is that the analgesia baby is a dopey or sleepy baby which in home deliveries is annoying to the physician as well as to the others concerned.

Summary

1. The ideal drug or combination of drugs for obstetrical analgesia has not yet been perfected.

2. Opium derivatives are dangerous and are prone to produce asphyxia neonatorum, especially in the premature infant.

3. The barbiturates produce a dopey or sleepy baby but do not increase the fetal mortality.

4. No routine method is applicable to all cases.

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Cheese contains in concentrated form many valuable nutritive elements of milk and is not indigestible as is commonly believed, *Hygeia, The Health Magazine* for March declares.

EDITORIALS

MOLIERE AND MEDICINE
1622-1673

Moliere's stinging indictment of the medical profession of his day should be considered in the light of medical history and the deplorable state of the Medical Faculty in Paris during his lifetime. It must be remembered that he was standing on the threshold of a world-wide intellectual awakening, with an individualistic freedom of thought and expression which was shaking the credulity of society and threatening the chains of tradition.

After twelve centuries of medical lethargy, the Renaissance resulted in a rude awakening of the profession. A critical scrutiny of time-honored practice gradually brought about certain reforms; additional knowledge led to more logical methods. In Moliere's day alchemy was being replaced by scientific chemistry, modern conceptions of anatomy and physiology were gradually gaining recognition. The study of physiological chemistry was underway. There was a growing interest in pathology and microscopy was being developed. Universities and scientific societies were being founded; medical and other scientific periodicals were appearing, and dissecting as a means of teaching anatomy was becoming more common.

In spite of all this, therapeutic credulity tenaciously clung to ancient folk-ways of practice. This was particularly true in Paris. The Faculty, entrenched behind centuries of tradition, was slow to accept anything that questioned the authority of Hippocrates and Galen. Furthermore, there was much jealousy and controversy within the Faculty as well as opposition to all that came from without. At this particular time the Paris Faculty had a formidable rival in the newly founded Chambre Royale of Renaridot, and Guy Patin, the fiery, versatile Dean of the Faculty, was out-spoken in condemnation of the new organization. He also made fun of the Court physicians and openly attacked their therapeutic vagaries, even attributing the death of certain prominent members of society to their petty bickering and their vaunted panaceas. Obviously it was a day of extravagant medication. Even the King reluctantly submitted to repeated bleeding and purging.

Multiple consultations with serious disagreements were common, giving rise to popular gossip and loss of confidence. Perhaps Moliere had access to the *Journal de la Sante du Roi*, which was kept by the Court Physicians, Vallot, Daquin and Fagon, and presented an account of Louis XIV's health and medical care. In it we find that the profligate life of the Court with its "gallantry, gluttony and passion," exacted its tribute of the King and supplied ample material for Moliere's consultation episodes, excessive bleeding and extravagant medication.

Though there has been much speculation as to whether Moliere may have had personal reasons for his scatching ridicule of the medical absurdities of his time, in the light of existing conditions, such a provocation would seem superfluous. The stage of ridicule of pedantry was handed down to him. Before taking up the serious indictment of the medical profession, he had severely scored the evils of society, the Court and religious bigotry.

No doubt his progressive illness and his personal contact with his own physician, Monsieur de Manvillian, whom he highly esteemed, made the shortcomings of the profession more obvious to him. But we find that in the presence of the King, he humorously taunted his physician by saying: "We reason with one another; he prescribes me remedies; I omit to take them and I recover." Naturally he may have suffered a keen disappointment because of his doctor's inability to arrest the progress of his pulmonary disease, but the hopelessness of advanced tuberculosis in his day was a matter of common knowledge and would have been accepted by his generous spirit without rebellion.

Omitting many interesting details which might be employed in support of our position, we hasten to express the belief that Moliere's supreme adventure against the evils of his day was free from personal grudge and without genuine malice toward the medical profession. Neither should we make the impression that Moliere was a militant reformer, losing sight of all else. He was too alert and broad-minded for that. Among his most valuable assets was the power to interpret the temper of society. He did not miss the fact that all Paris was impatient for a good laugh at the expense of the medical profession. The work of his genius was never the result of enmity or malice. It needed only the occasion for comedy, with a moral, and he was off with the enthusiasm and devotion of a Romeo. To Moliere such an opportunity came as the breath of life.

No doubt Moliere found much of his comedy in his own misery. In his last play, *Le Malade Imaginaire,* in which he presents Argon as the imaginary invalid, we find genuine suffering and even the harbinger of death hiding behind an imaginary malady. Of all the comedies in which Moliere takes the medical profession to task, this last one most deserves a careful reading.

Moliere took the part of the imaginary invalid and after the third performance, he confessed that he no longer had strength for the struggle, but added "how much a man must suffer before he can die." He was urged not to tax his strength by another appearance on the stage. His reply reveals his character. "What would you have me do? There are fifty poor workmen who have only their day's wages to support them; what would they do if I did not act?"

On Friday evening, February 17, 1673, he returned to the stage for the fourth performance, and while in the final scene he experienced a convulsive seizure which, perhaps, his audience misinterpreted as a part of the imaginary malady. The performance was completed but the genuine premonition caused him to sink into a chair back of the stage, never to rise again. He was carried from the theatre which the tuberculous Cardinal Richelieu had built, to the "Rue de Richelieu where he then lived." He was put to bed and his wife had gone for a special pillow, when he had a paroxysm of coughing and raised the fatal blood. Spitting of blood was not new to Moliere and seemed not to frighten him, but this was his last. Soon he was suffocated by the crimson flood and died in the arms of two sisters of charity, who had found refuge in his home while they were temporarily in Paris begging alms.

At the age of fifty-one, in less than an hour after successfully playing the part of the imaginary invalid, Moliere, one of the greatest figures in French literature, was dead.

Moliere rendered a great service to humanity through his satirical arraingment of the medical profession. The antiquated and extravagant practice of the Paris Faculty and its opposition to new advances evidently gave Moliere much concern and inflamed his genius for reform. It is unfortunate that he could not look ahead one hundred and fifty years to Laennec, that tuberculosis medical genius, who made poetry of pathology and in the fleeting moments of a short life-time, laid the foundation for the diagnostic and therapeutic measures promising ultimate defeat of the disease which swiftly terminated his exceptional life.

Soon after Moliere's death, Paris was leading the world in medical thought. It is difficult to estimate his influence in this direction. No doubt it was greater than his biographers have realized.

In this bit of medical history there is a valuable lesson for the medical profession. While combatting unjust criticism and the proposed trends toward socialized medicine, the members of the profession should recognize changing conditions and strive to give the best possible medical service with a minimum of confusion and expense. If it is difficult for the physician to keep abreast of medical progress, it is much more difficult for the patient to comprehend the shifting methods of practice. Under such circumstances, the physician must become an educator. The patient should understand why modern medicine becomes more difficult and more costly, but at the same time, more efficient and more readily available to all classes. The people need more knowledge of what medicine has done in the past and what it is capable of doing today. They should know of the individual physician's willingness to serve and the organized efforts on the part of the profession to make medical service available to all the people all the time. Lack of knowledge often leads to criticism and intolerance.

Politicians are ready to follow any lead that promises political expediency. Through generous service and patient instruction, the medical profession may guard against both comedy and tragedy.—L. J. M.

College of Physicians Elects Officers

Dr. Roger I. Lee, Boston, a Trustee of the American Medical Association, was named president-elect of the American College of Physicians at the annual session in Cleveland April 1-5, and Dr. James D. Bruce, Ann Arbor, Mich., was installed as president.

Vice presidents elected were Drs. Robert A. Cooke, New York; James G. Carr, Chicago, and Henry M. Thomas, Jr., Baltimore. Drs. William Gerry Morgan, Washington, D. C., and James B. Herrick, Chicago, received the title of "master" of the college, the first time this honor had been conferred in eleven years. Only six physicians have previously been so honored.

Vitamin Advertising and Mead Johnson Policy

The present spectacle of vitamin advertising running riot in newspapers and magazines and via radio emphasizes the importance of the physician as a controlling agent in the use of vitamin products.

Mead Johnson and Company feel that vitamin therapy, like infant feeding, should be in the hands of the medical profession, and consequently refrain from exploiting vitamins to the public.

Woodward Doctors Purchase Hospital

Dr. C. E. Williams has been elected president of the corporation of doctors which has purchased the Woodward General Hospital. Dr. D. W. Darwin, was named vice-president and Dr. C. W. Tedrowe secretary-treasurer.

Other members of the corporation board are Dr. Joe Duer, Dr. T. C. Leachman, Dr. V. M. Rutherford, and Dr. M. C. England.

STUDIES IN THE AVITAMINOSES



This page is the fifth of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the April 27 issue of The Journal of the American Medical Association.

ONE of the specific lesions resulting from thiamin deprivation consists of degenerative changes in the myelin sheaths of nerve fibers. In peripheral nerves, the myelin breaks down into small globules and finally disappears, and the axis-cylinder undergoes atrophy and fragmentation. Degeneration has been described also in the spinal cord, especially in the posterior columns and anterior and posterior nerve roots, and in the posterior spinal ganglions and the anterior horn cells.



Nerve degeneration caused by vitamin B_1 deficiency. Marchi method of staining, showing deteriorated myelin as black dots in the fasciculi. (At right)

Nerve degeneration in same patient. Weigert stain; normal myelin sheaths in the microscopic section appear dark blue; degenerated nerve fibers do not take the stain. (Courtesy of H. M. Zimmerman, M.D., Yale University School of Medicine and the New Haven Hospital.)

The Neurologic Manifestations of Vitamin B_1 Deficiency



Above, peripheral neuritis of nutritional etiology; note limited dorsiflexion. At right, improvement in dorsiflexion after two and one-half weeks of thiamin chloride therapy. (Courtesy of Henry Field, Jr., M.D., University of Michigan.)

THE early manifestations of vitamin B_1 deficiency affecting peripheral nerves are pain and burning along the involved sensory neurons and impairment of motor nerve function. If the deficiency remains uncorrected, fragmentation of the axis-cylinders of motor nerves follows, leading to further loss of function and atrophy of the innervated muscles. Administration of thiamin chloride over a prolonged period slowly produces regeneration of the involved neurons. If complete degeneration of cells and axis-cylinders in the central nervous system has occurred, regeneration cannot take place.

UPJOHN

ASSOCIATION ACTIVITIES

New Post-Graduate Obstetrics Course is Under Way

Under the sponsorship of the University of Oklahoma School of Medicine, a new intramural post-graduate course in practical and clinical obstetrics and allied subjects is getting under way late in May in Oklahoma City. Enrollment for the course was to begin May 20, continuing for two weeks. The course then will be repeated intermittently as circumstances and demand may justify.

Through the addition of a full-time teacher, Dr. Edward N. Smith, the School of Medicine is able to sponsor the course. Active material and financial assistance are being provided through the cooperation of Dr. Grady F. Mathews, Commissioner of the Oklahoma State Department of Health, and through Children's Bureau of the Department of Labor, Washington, D. C.

Although the University of Oklahoma has carried on extension classes in various branches of medical instruction for many years, and with excellent results, an extension class must necessarily leave uncovered an important field in medical review, the sponsors pointed out. They give little chance for a review of subjects from a clinical angle, and even less chance for the physician to place his hands on a living patient. To bridge over this defect, it was stated, and to provide the long-sought opportunity for the physician to obtain, at a minimum expense and in a minimum period of time, a comprehensive review of the fundamentals of practical obstetrics, this course was conceived and devised.

The wards of the University Hospital have been made available to the qualified enrollees of the course, as well as a newly organized obstetrical out-patient clinic which will be administered specifically for the benefit of the post-graduate students. In addition, the wards and personnel of the Home of Redeeming Love will be available for demonstration and teaching practice. The Departments of Anatomy and Pathology have loaned their full facilities, which includes gross and microscopic specimens, manikins, models, charts, etc.

As allied with obstetrics, there will be instruction in anatomy, pathology, pediatrics, neuro-surgery, urology, surgery, medicine, and intensive instruction in obstetrics.

Applications will be considered only from regularly qualified physicians in good ethical standing. Not more than four applicants will be accepted for enrollment at any one time, which will assure individual and highly personalized instruction.

No fee is charged for the course. There is a registration fee of $25.00, which must accompany the application for enrollment. This fee covers breakage, depreciation on materials used, clerical expense involved, and incidentals. No diploma will be issued, but upon completion of the course, a certificate of attendance will be furnished, with a refund of $10.00 to the physician, unless unusual items of breakage or damage to University equipment has been incurred.

Additional information may be obtained by corresponding directly with the Department of Post-Graduate Obstetrics, Room 8, University Hospital, Oklahoma City.

In conjunction with the physicians' course, and with the same sponsor and cooperating agencies, the University of Oklahoma School of Nursing will offer a four months post-graduate course in obstetrics and allied subjects, the purpose being to enrich and broaden the experience of the gradnate nurse through the opportunities existing in this field.

Forty-Eighth Annual Session Attracts State Physicians

With the attendance figure standing at 820, and marked by a successful, systematized program of interesting and instructive features, the three-day forty-eighth annual session of the Oklahoma State Medical Association came to a close the afternoon of May 8 with the last general scientific session in the Crystal Ballroom of the Mayo Hotel, Tulsa.

General eulogistic comments were pointed toward the Tulsa County Medical Society, the host group, for the meeting successfully undertaken and carried out. Dr. Manrice J. Searle served as chairman of arrangements.

Dr. Henry H. Turner of Oklahoma City, President-Elect during 1939-40, ascended to the chair of the presidency following his installation Tuesday evening, May 7. His address will be found on page one of this issne. Dr. W. A. Howard of Chelsea, retiring president, was named by the House of Delegates as junior delegate to the American Medical Association meeting.

Elected to the position of President-Elect was Dr. Finis W. Ewing of Muskogee, present councilor of district eight. Dr. Ewing's councilor duties will be carried on by Dr. Shade D. Neely of Muskogee, selection of whom was approved by the House of Delegates.

Dr. William A. Tolleson of Eufaula, who recently was named president of the Southeastern Oklahoma Medical Society, was selected as vice-president. The House re-elected Dr. James D. Osborn of Frederick as its Speaker, and Dr. P. P. Nesbitt of Tulsa as Vice-Speaker. Dr. O. E. Templin of Alva, councilor of district one, only councilor whose term expires this year, was re-named to that position. Oklahoma City will be the meeting place in 1941.

The guest speakers, Dr. Alphonse McMahon of St. Louis, Mo., Vice President of the American Medical Association; Dr. Edward H. Skinner of Kansas City; Dr. Horton R. Casparis of Nashville, Tenn.; and Dr. Curtice Rosser of Dallas, Texas, all received plaudits for their valuable and instructive offerings.

Time before publication of this month's Journal did not permit preparation of the abstracts of the minutes of the House of Delegates meetings, but these will appear in an early isue.

Contract Given For Sanatorium Project

Contract for construction work at the Western Oklahoma Tuberculosis Sanatorium at Clinton has been awarded to F. L. Bray Construction Company, Oklahoma City, at $53,900 by the state board of affairs.

The project includes construction and eqnipping of the hospital with a heating plant and laundry, and installation of steam tunnels, sewers, water and gas lines.

Dr. Robert U. Patterson, dean of the University of Oklahoma School of Medicine, was the principal speaker at the April meeting of the Garfield County Medical Society in Enid. He discussed the progress and needs of the School of Medicine. Dr. Joseph W. Kelso of Oklahoma City read a paper on "Carcinoma of the Cervix."

Four Oklahoma physicians left late in April for Camp Jasper, Texas, to represent the state in the reserve medical officers' department at spring war maneuvers. They are Dr. C. A. Johnson, of Wilson; Dr. G. E. Johnson of Ardmore; Dr. John L. Day of Snpply; and Dr. D. J. Lyons of Seminole. The four will serve in the army hospital during the 28-day war drills.

Binkley New Assistant Managing Director of A. S. C. C.

High rewards for his interest and hard work in the specialty he chose went to Dr. J. Samuel Binkley this past month when he received word of his appointment as assisting managing director of the American Society for the Control of Cancer, with headquarters at 350 Madison Avenue, New York City.

Dr. Binkley, son of Dr. J. G. Binkley of Oklahoma City, during February and March of this year spoke before more than 13,000 laymen and 1,142 physicians in a statewide cancer program under the spousorship of the Oklahoma State Medical Association, the Women's Field Army of the American Society for the Control of Cancer, and the State Health Department. Such overwhelming success was accorded the program that interest has been directed toward the course by many out-of-state agencies.

Dr. Binkley, who has been serving as assistant chief of the Chest Department of Memorial Hospital, New York City, a capacity he held when he was brought to Oklahoma by the Association and cooperating agencies to conduct the statewide program, was pointed out by Dr. C. C. Little, managing director of the American Society for the Control of Cancer, as having "distinguished himself as one of the nation's foremost educators of the layman in cancer conditions and control."

A graduate of the University of Oklahoma and Harvard Medical School, the young cancer expert is a Surgeon and Rockefeller Clinical Fellow in Cancer Research, and holds memberships in Phi Beta Kappa, Phi Beta Pi, the New York Academy of Science, the International Union Against Cancer, and the Harvard Medical Society of New York. He has appeared on the scientific programs of the International Cancer Congress, the American Association for Thoracic Surgery, and for three years served the New York City Cancer Committee as speaker.

Dr J. S. Fulton is Honored For Fifty Years of Service

Dr. J. S. Fulton was honored at a meeting of the South Eastern Medical Society held in McAlester, April 11, 1940, this being the fiftieth anniversary of his graduation and entrance into the practice of medicine. He was presented with a beautiful bronze plaque which bore the following inscription. "Joseph Samuel Fulton, M. D., 1890-1940. Fifty years of service to Humanity and Organized Medicine."

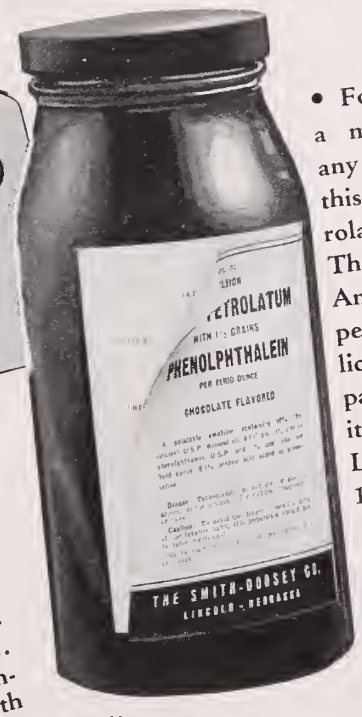
The presentation was made by Dr. LeRoy Long, of Oklahoma City. He told of Dr. Fulton's long service to organized medicine, how he became a member of the Indian Territory Medical Association in 1891, has held office in the Oklahoma State Medical Association continuously for twenty five years and has never missed but two meetings since its organization in 1906. This very fitting ceremony and presentation was sponsored by Dr. Fulton's Neighbor Physicians and bespeaks the high esteem in which he is held.

In replying to this presentation, Dr. Fulton could not easily control his emotions, as it was all a complete surprise and he could hardly more than thank his friends for such an expression of confidence and esteem.

Dr. W. A. Tolleson of Eufaula was elected president of the society at the meeting. Dr. E. D. Greenberger of McAlester was named vice-president, and Dr. W. H. Kaiser of McAlester, secretary-treasurer.

New!

Announcing A CHOCOLATE FLAVORED EMULSION OF LIQUID PETROLATUM



Council Accepted

• Emulsion of Liquid Petrolatum Chocolate Flavored is Council accepted. A PRESCRIPTION PRODUCT DESIGNED ESPECIALLY FOR THE PHYSICIAN (note prescription label on the bottle). And it may be obtained without phenolphthalein—or with 5 grains or 1½ grains to the fluid ounce.

ACCEPTED AMERICAN MEDICAL ASSN Council on Pharmacy and Chemistry — Council Accepted

• For patients required to take a mineral oil emulsion over any length of time—prescribe this Emulsion of Liquid Petrolatum Chocolate Flavored. There is no oily after-taste! And it has the inviting appearance and flavor of a delicious chocolate dessert. Your patients do not rebel against it! This product contains 60% Liquid Petrolatum U.S.P. and 1% agar agar.

Mail Coupon for Sample

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Lincoln, Nebraska.

Gentlemen: Please send me a sample of Emulsion Liquid Petrolatum Chocolate Flavored.

☐ With Phenolphthalein
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Dr.

Address

City State

Pottawatomie County Society Holds Annual Spring Clinic

With the guest speakers all members of the faculty of the Baylor School of Medicine at Dallas, Texas, the Annual Spring Clinical Meeting of the Pottawatomie County Medical Society was held April 16 in Shawnee. Sessions were conducted in the Civic Room of the Aldridge Hotel.

The guest speakers were: Dr. Walter Grady Reddick, Internist; Dr. Robert Shaw, Chest Surgery; and Dr. O. T. Woods, General Surgery.

At the afternoon meeting, the following talks were made: "The Chemotherapy with Sulfanilamide Derivatives," Dr. Reddick; "The Indicatious and Results of Surgery in Pulmonary Suppuration," Dr. Shaw; and "The Treatment of Breast Tumors," Dr. Woods. Dr. W. A. Howard, retiring president of the Oklahoma State Medical Association, gave an explanatory talk on the hospital insurance plan which has recently been established in the state.

During the evening session, Dr. Woods spoke on "The Treatmeut of Intestinal Obstruction"; Dr. Shaw talked on "The Tumors of the Chest Requiring Surgery"; and Dr. Reddick's address was on "The Treatment of Pneumococcal Pneumonia." The talks were illustrated by lantern slides and chalk drawings aud were very comprehensive and well-presented.

The April meeting of the Beckham County Medical Society was held in Elk City. Dr. V. C. Tisdal read a paper on "Infantile Paralysis." Physicians from Sayre, Erick, Carter, Cheyenne and Elk City attended the session. The next meeting of the society will be at Erick.

Dr. Alpha L. Johnson of El Reno has returned from a three-month course of study in the Post-Graduate School of Medicine, New Orleans, La.

Mrs. D. G. Willard was elected president of the Women's Auxiliary of the Cleveland County Medical Society April 11 in Norman. Mrs. Charles A. Brake was elected vice-president; Mrs. George A. Wiley, treasurer; Mrs. T. T. Beeler, jr., secretary. Mrs. M. M. Wickham was appointed historian.

Dr. Roy E. Newman of Shattuck, accompanied by Mrs. Newman, left in late March for Chicago, Ill., where he was to receive post-graduate work at the Cook County Graduate School of Medicine. He planned to return to Shattuck in six weeks.

Dr. Waldo B. Newell of Enid has returned from New York City, where he speut three weeks taking a post-graduate course at Columbia University.

Among state physicians attending the annual session of the Arkansas Medical Society in Fort Smith in April were Dr. John H. Harvey, Dr. E. N. Fair and Dr. M. L. Henry of Heavener.

Mrs. J. W. Mercer of Enid was elected president of the Garfield Medical Auxiliary, succeeding Mrs. Harry H. Hudson, at its April meeting. Mrs. H. F. Vandever was named vice-president; Mrs. D. D. Roberts, secretary; and Mrs. J. W. Francisco, treasurer, Dr. George N. Wood of the Phillips University faculty spoke on "Foreign Affairs."

Dr. L. G. Livingston of Cordell left in late April for Fort Benning, Georgia, where he is spending a month in the United States Army medical field service school, which is conducting a course this year in conjunction with third army maneuvers. Dr. Livingston is a captain in the medical corps reserve.

Alpha Epsilon Delta Conducts Sixth Biennial Convention

One hundred and twenty-eight members from tweuty-four collegiate chapters attended the sixth biennial convention of Alpha Epsilon Delta, national honorary pre-medical fraternity, which was held with the Oklahoma Alpha chapter at the University of Oklahoma from March 21 through March 23, 1940, under the directiou of Dr. Charles F. Poe, national president. This high registration keynoted the interest and enthusiasm of the members for the activities and progress of the fraternity.

The convention opened with an informal meeting on Thursday evening at which time an initiation, of candidates from the Oklahoma Alpha chapter, was conducted by the national officers. Following the initiation, Dr. Felix M. Adams, Eastern Oklahoma State Hospital for the Insane, Vinita, Okla., gave a lecture on "Insulin Shock and Metrazol Treatment," which was illustrated with a film in technicolor. Tours of the University of Oklahoma Medical School at Oklahoma City and the Central Oklahoma State Hospital at Norman, acquainted the visitors with some of the medical facilities of the state. On Friday evening, at an Indian Dinner and program, they were initiated into the secrets of the training of the Indian medicine man.

The convention banquet was held at the Biltmore Hotel, Oklahoma City, on Saturday evening, at which time Dr. Henry H. Turner, assistant professor of medicine, School of Medicine, University of Oklahoma, gave an address entitled, "The Wagner Health Bill," and Dr. Wendell Long, Oklahoma City gynecologist, presented "A Brief History of Medicine."

In recognition of their commeudable work for the fraternity the convention reelected the following national officers: Dr. Charles F. Poe, professor of chemistry, University of Colorado, National President; Dr. Kenneth P. Stevens, professor of biology, Central College, National Vice-President and Editor of THE SCALPEL; Dr. Maurice L. Moore, research chemist, Sharp & Dohme, Drexel Hill, Penna., National Secretary; Dr. W. H. Steinbach, professor of chemistry, University of Arkansas, National Treasurer; and Dr. Emmett B. Carmichael, professor of physiological chemistry, School of Medicine, University, Alabama, National Councilor.

Joins Post Graduate Association Tour

Dr. John A. Cunningham, House Surgeon at the Polyclinic Hospital in Oklahoma City, left April 11 for an extended tour with the Inter-State Post Graduate Medical Association. He joined the Assembly at Rochester, Minn., and from there was to visit clinics in Chicago, Cleveland, Bostou, New Haven, New York, Philadelphia, Baltimore and Washington.

At the April meeting of the Womeu's Auxiliary of the Oklahoma County Medical Society, the following new officers were elected: Mrs. F. Maxey Cooper, president; Mrs. Neil Woodward, president-elect; Mrs. L. Chester McHenry, vice-president; Mrs. P. M. McNeill, recording secretary; Mrs. Onis Hazel, corresponding secretary; Mrs. Joseph W. Kelso, Treasurer; Mrs. Allen Bibbs, assistant treasurer; Mrs. N. Price Eley, parliamentarian; Mrs. Frank Harbison, press and publicity.

Plans for a new $15,000 hospital for Madill have been started by Dr. J. F. York and Dr. J. S. Raff of the Madill Clinic. The brick or tile one-floor building will house 20 beds, with provisions made for a possible addition of a second floor.

Dr. T. Burke Triplett of Mooreland has returned from Chicago, where he was enrolled in a ten-day intensive post-graduate course at the Cook County Hospital.

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Prior to the discovery of Insulin, diabetes in a child led to severe restrictions in his mode of life and, in most cases, an early death. Today, in contrast, there are hundreds of happy, active diabetic children—leading practically normal lives with the aid of Insulin.

More institutions, more physicians, and more patients are using Insulin Squibb and Protamine Zinc Insulin *Squibb* than ever before. They rely on the quality and dependability of these Squibb Products.

INSULIN SQUIBB—An aqueous solution of the active, anti-diabetic principle obtained from pancreas. It is accurately assayed, uniformly potent, carefully purified, highly stable, and remarkably free from pigmentary impurities and proteinous reaction-producing substances. Insulin Squibb of the usual strengths is supplied in 10-cc. vials.

PROTAMINE ZINC INSULIN *Squibb*—Insulin Squibb to which protamine and zinc have been added. The product is carefully assayed and conforms to the specifications of the Insulin Committee, University of Toronto.

Protamine Zinc Insulin *Squibb*, 40 units per cc., is available in 10-cc. vials.

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MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

News From The State Health Department

The Oklahoma State Health department has expanded greatly within the past four years, and one of the important ways in which its service has grown has been in the service and benefits offered, without cost, to the private physicians of the state.

This cooperation with the private physicians has been in two forms: payments for physicians' services in venereal disease clinics, baby clinics, laboratory services and similar items, and financial backing for refresher courses.

Speaking in terms of dollars and cents, the state health department, from its 1940 budget, has spent and is spending $107,455 for the benefit of the private physicians of Oklahoma.

This sum, spent directly to benefit the medical profession, equals one half of the total appropriation by the state legislature for public health work in Oklahoma.

The following is a "breakdown" of funds contributed to the medical profession from the 1940 budget of the Oklahoma State Health department:

LOCAL PRIVATE PHYSICIANS' FEES FOR VENEREAL DISEASE CLINICS	$14,800
PART-TIME PHYSICIANS' SALARIES FOR VENEREAL DISEASE CLINICS	6,000
FEES PAID PRIVATE LABORATORY (PNEUMONIA WORK)	3,225
CANCER REFRESHER COURSE	2,250
DELIVERY FEES AND NURSE ASSISTANT AT HOME DELIVERY, DISTRICT ONE	6,320
PEDIATRICS COURSE FOR PHYSICIANS	5,000
LECTURER'S FEES ON PEDIATRICS COURSE FOR HEALTH OFFICERS	960
PRIVATE PHYSICIANS' FEES FOR CONDUCTING BABY CLINICS	500
DRUGS FOR TREATMENT OF VENEREAL DISEASE	7,500
COST OF LABORATORY SERVICE TO PRIVATE PHYSICIANS	28,500
COMMONWEALTH PARTICIPATION (O. B. COURSE)	11,500
COMMONWEALTH REFRESHER COURSE (8) FOR PRIVATE PHYSICIANS	8,000
CLINICAL COURSE OBSTETRICS IN COOPERATION WITH UNIVERSITY OF OKLAHOMA MEDICAL SCHOOL	12,900
TOTAL	$107,455

Local physicians throughout the state are participating in the venereal disease clinics conducted by the State Health Department, being paid at the rate of $2.50 an hour. Only indigent patients are treated.

The pneumonia control program is available to any indigent patient through his private physician, and the health department pays for sulfapyridine and laboratory work.

The State Health department helped finance the refresher courses in cancer, obstetrics and pediatrics. The registration fees paid by the physicians amounted to less than 10 per cent of the cost of the courses.

Fees are available to private physicians for conducting well baby and pre-school clinics in connection with the county health departments.

The clinical courses in obstetrics are offered to the physicians of Oklahoma by the University of Oklahoma School of Medicine. The course is designed to enable busy physicians to obtain a short, practical course in obstetrics at the University hospital. This course is being financed by the State Health department, in cooperation with University of Oklahoma School of Medicine.

The goal of the State Health Department is to carry out its program, working with the private physicians, and as an aid, it is spending a sizeable portion of its funds for the direct benefit of the private physicians.

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HAS SHOWN A CONVINCING RECORD* OF EFFECTIVENESS IN ACUTE ANTERIOR URETHRITIS

due to Neisseria gonorrheae • Trichomonas vaginalis Monilia albicans

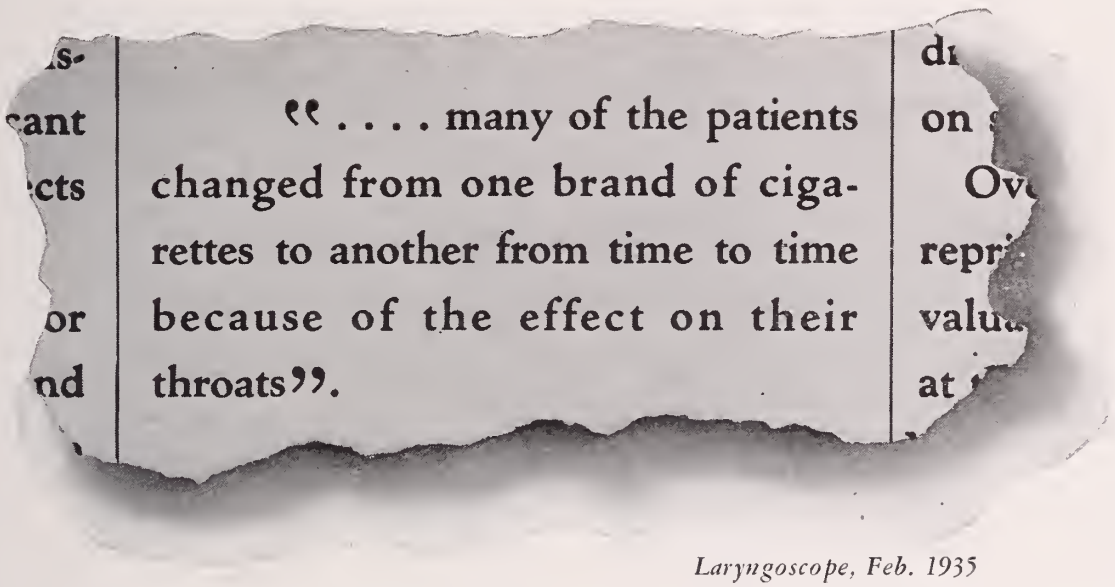
Silver Picrate is a crystalline compound of silver in definite chemical combination with picric acid. Dosage form for use in anterior urethritis: Wyeth's Silver Picrate Crystals in an aqueous solution of 0.5 percent.

Supplied at all pharmacies in vials of 2 grams

Complete literature on Silver Picrate as used in genitourinary and gynecological practice will be mailed on request.

*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.



Laryngoscope, Feb. 1935
Vol. XLV, No. 2, 149-154

ON GUIDING PATIENTS IN THEIR CIGARETTE SMOKING

It is certainly worth knowing that tests reported in the same paper showed every case of irritation of the nose and throat due to smoking *cleared completely or definitely improved* when smokers changed to Philip Morris.

Write for reprints of published studies on the comparative irritant properties of cigarettes. Address Philip Morris & Co., Ltd., Inc., 119 Fifth Avenue, New York.

Wagner-George Hospital Bill Analyzed

The following article is an analysis of the Wagner-George Hospital Construction Bill as reported to the Senate. The analysis was prepared by the Bureau of Legal Medicine and Legislation of the American Medical Association and was to appear in an early issue of The Journal of the American Medical Association.

The Senate Committee on Education and Labor reported the Wagner-George hospital construction bill, S. 3230, to the Senate April 30, recommending that all after the enacting clause of the bill be stricken and suggesting substitute provisions drawn partly from the original bill, partly from recommendations made to the committee at the hearing recently conducted on that bill, and partly from Senator Taft's hospital construction plan.

The reported bill proposes a six year program for providing needed hospital facilities. To assist states, counties, health and hospital districts and other political subdivisions of the states to provide better health and medical services through the construction, improvement and enlargement of needed hospitals, especially in rural communities and economically depressed areas, the bill authorizes to be appropriated to the United States Public Health Service (1) $10,000,000 annually for six years, beginning with the fiscal year ending June 30, 1941; (2) annual appropriations of $500,000 for six years for administrative expenses; (3) for each of the five fiscal years beginning with the fiscal year ending June 30, 1947, such sums as may be necessary for hospital maintenance grants under the act, and (4) such sums as may be required by the Public Health Service, after the initial six year period, for necessary expenses in administering such provisions of the act as may then be in operation, as, for example, those relating to grants for maintenance. All amounts appropriated for the fiscal year ending June 30, 1942, and thereafter are to remain available until expended.

Definitions

The term "hospital" as used in the reported bill includes "health, diagnostic and treatment centers the equipment thereof, and facilities relating thereto." The term "hospital project" includes the construction, improvement or enlargement of a hospital. The term "state" includes the territories and insular possessions of the United States.

Two Construction Plans Contemplated

The program contemplates two plans for the construction of hospital projects. Plan I relates to hospital projects to be undertaken under the appropriation of $10,000,000 for the fiscal year ending June 30, 1941. Plan II proposes a different construction program to be carried out from the annual federal appropriations of $10,000,000 for five fiscal years beginning July 1, 1941.

Hospital Construction Plan I

During the fiscal year ending June 30, 1941, the program contemplates that any state, county, health or hospital district or other political subdivision of a state desiring to participate in the benefits of the bill shall apply to the Surgeon General of the Public Health Service, through the state health authority.

Contents of Application.—Each application must contain information necessary (1) to establish the need, in addition to existing public and private hospitals, for the hospital project to which such application relates and (2) to satisfy the Surgeon General that the hospital (a) will be made available, under appropriate conditions and to the extent of the hospital facilities, to every person residing in the territorial area of the applicant for such hospital, (b) will be maintained in good repair and (c) will be utilized in furnishing service of satisfactory quality, in accordance with standards from time to time prescribed by the state and approved by the Surgeon General or, prior to the effective date of such standards, in accordance with standards prescribed by the Surgeon General.

Approval of Application.—This application must first be approved by the National Advisory Hospital Council to be created under the provisions of the bill. If an application has been approved, the Public Works Agency is to be authorized to construct the hospital.

Lease of Hospital.—After completion of a hospital, the Surgeon General is authorized to lease it to the applicant, the title to such leased hospital, to the equipment installed therein by the United States and to the land on which such facilities are located to remain in the United States until divested by conveyance as authorized by the act or as otherwise authorized by law. Any such lease may be terminated only (1) on mutual consent or (2) on conveyance of the hospital to the lessee or (3) if the Surgeon General finds that the lessee has failed substantially to comply with any applicable rule or regulation of the Surgeon Geueral or with any provision in the lease.

Each lease must contain a provision requiring the lessee to yield up the premises and equipment at the termination of the lease in the same condition as the premises and equipment were received, reasonable wear and tear excepted, and may contain such other provisions not inconsistent with the act as are prescribed by the Surgeon General, including requirements with respect to additions to the premises and equipment leased.

Conveyance of Leased Hospital.—On recommendation of the Surgeon General, based on satisfactory operation of a hospital by the lessee, the Federal Security Administrator "may convey such hospital to the lessee thereof, and he shall make such a conveyance in any case in which the Surgeon General finds that any such lessee has operated any such hospital in accordance with the term of his lease and the rules and regulations promulgated under this act for sixty consecutive months."

Operation of Hospital After Lease Cancelled.—The bill does not disclose the manner in which a hospital is to be operated if for any reason a lease is cancelled.

Hospital Construction Plan II

From the appropriations to be made available during the second, third, fourth, fifth and sixth year of the program, it is contemplated that grants will be made to states, counties, health or hospital districts or other political subdivisions of a state, to aid in defraying the cost of constructing needed hospital facilities.

State Plan Required.—No federal money to be made available during these five years, for construction or maintenance purposes, may be used in any state unless that state has submitted to the Surgeon General "state plans for constructing, improving, or enlarging needed hospitals." Such a plan must specify (*a*) the location, character, adequacy and methods of operation of the existing public and private hospitals in the state, (*b*) the type, size and location of any additional hospitals that may be needed and (*c*) such other information with respect to such existing hospital and additional needed hospitals as the Surgeon Geueral may require.

Contents of Application.—In addition to the information required of an applicant under construction plan I, an application under plan II must contain (1) a description of the site for the project, (2) preliminary plans and specifications therefor and (3) assurance that title to the site is, or will be, vested solely in the applicant.

Approval of Application and Determination of Amount of Federal Grant.—After an application under

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SINCE INDIVIDUAL PATIENTS with Pernicious Anemia vary one from another and from time to time in the amount of liver extract needed, no dogmatic statements can be made as to dosage. Every patient should receive at least enough of the material to maintain a normal blood picture. "Lederle's 1 cc." extract usually meets such requirements when injected at intervals of 7 to 15 or more days.

For the successful treatment of severe neurologic involvement much more extract is indicated than is required for the maintenance of normal blood. An excess of liver is useful to the extent that it may be stored in the body reservoirs and drawn upon as needed.

Neurological complications and relapse need not develop once the patient's cooperation is gained. Lederle's 1 cc. concentrated solution liver extract, containing 15 USP units, aids in gaining this cooperation by

— fewer injections;
— less discomfort;
— less inconvenience.

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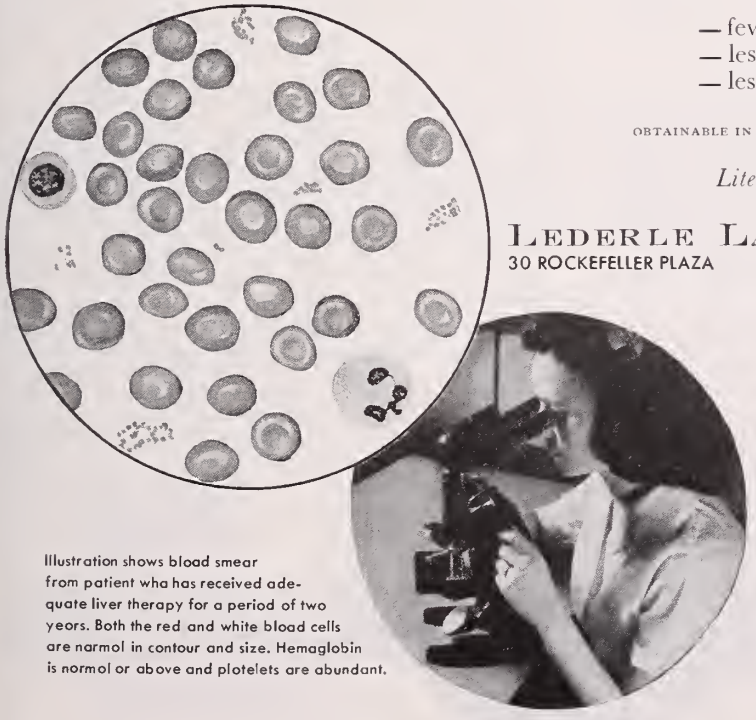


Illustration shows bload smear from patient wha has received adequate liver therapy for a period of two yeors. Both the red and white bload cells are narmol in contour and size. Hemaglobin is normol or above and plotelets are abundant.

plan II has been approved by the Surgeon General (plan I requires approval of an application by the National Advisory Hospital Council) that official, after proper investigation, will determine the amount of the grant to be made, "which grant shall not be less than twenty-five per centum, nor more than ninety per centum of the cost of such hospital project and equipment therefor," the percentage being determined after taking into consideration, if the applicant is a state, its financial resources as measured by the per capita income accruing to the inhabitants thereof, and, if the applicant is other than a state, such financial resources of the state in which the aplicant is located and the financial condition and ability of the applicant. The applicant must submit satisfactory proof of ability to pay its share of the cost of such project and equipment. Grants are to be made available to an applicant in such instalments as are recommended by the Federal Works Administrator, who is to be authorized to make such inspections of the hospital during its construction as he deems necessary.

Title to Hospital Constructed Under Plan II.—It is contemplated that the federal government shall acquire no title to hospitals constructed under plan II.

Grants for Maintenance

With respect to hospital projects constructed under either plan I or plan II, on recommendation of the Surgeon General, the Federal Security Administrator may authorize grants for maintenance during the first five years of operation of the project. In making his recommendation the Surgeon General will, it is contemplated, take into consideration the financial ability of the applicant to maintain the hospital. If a mental hospital, the grant for maintenance may not exceed $150 per bed for the first year, $120 for the second year, $90 for the third year, $60 for the fourth year and $30 for the fifth year. If other than a mental hospital, such grant may not exceed $300 a bed for each of the first two years, $240 for the third year, $180 for the fourth year and $120 for the fifth year.

The Federal Security Administrator may refuse to continue or may reduce maintenance grants if the Surgeon General finds that a hospital project has not been operated in substantial accordance with the rules and regulations promulgated under the act or in accordance with the terms of a lease.

National Advisory Hospital Council

The National Advisory Hospital Council will consist of the Surgeon General of the Public Health Service as chairman and eight members appointed by the Surgeon General with the approval of the Federal Security Administrator, selected from leading medical or scientific authorities who are outstanding in matters pertaining to hospitals and other public services. Each appointed member will receive $25 a day during the time spent on official business and in addition expense allowances.

The Council is to be authorized, in addition to approving applications under plan I, "to advise" the Surgeon General with reference to the carrying out of the provisions of the act, including (1) standards which are necessary to insure the construction of proper buildings and the securing of proper equipment; (2) the method by which hospital personnel may be best trained; (3) standards and principals to be considered in connection with any state plan; (4) standards which are necessary to insure proper administration of the hospitals constructed under the act, and proper care of persons served by the hospitals; (5) standards to be considered in determining the need for hospital projects for which applications are submitted and in determining whether such projects will be adequately maintained and will otherwise fulfill the requirements of the act; (6) procedures for securing reports and for making inspections with reference to professional service in and standards of maintenance of hospitals constructed under the act, and (7) standards for making certain other determinations.

United States Public Health Service

In addition to passing on applications for projects and maintenance grants, the Surgeon General will be authorized, "after consultation with the Council as to general policies," (1) to prescribe standards for training any personnel required in connection with any such hospital project and to assist financially such personnel in securing such required training, subject to the limitation that the total amount of such assistance shall not exceed 2 per cent of the amounts appropriated for construction and maintenance; (2) to cooperate with federal, state and local health and welfare authorities and with professional agencies; (3) to make inspections with respect to professional service in and maintenace of hospitals constructed under the act, and (4) to make such rules and regulations as may be necessary to carry out the purposes of the act, including the prescribing of standards of personnel, maintenance and operation of hospitals constructed under the act and the requiring of reports with respect to such hospitals.

The bill authorizes the appointment of such additional commissioned officers and other personnel in the United States Public Service as may be necessary in carrying out its provisions.

Taft Hospital Building Plan Submitted to the Senate

The Hospital Construction Act of 1940, reported in the Senate in April with favorable recommendations by the Committee on Education and Labor, has been revised from the original Administration draft to conform closely with the substitute plan of Senator Robert A. Taft of Ohio.

The bill as first filed by Senator Wagner called for the construction of a chain of hospitals to be owned by the Federal government, having no relation to existing state and local hospital systems. Criticism has been stated that while the hospitals were to be leased to local authorities, liability to pay maintenance costs would almost certainly have resulted in their reversion to Federal ownership and operation. Furthermore, the hospitals were to be built with WPA labor rather than by contract, critics said.

Senator Taft proposed that Federal money be used as grants to state and local authorities to enable them to extend the state and local hospital systems; and that all new hospitals be owned by states or local governments. He further proposed that construction of these fire proof modern buildings be done under contract rather than with WPA labor at relief wages.

The plan provides that the federal government contribute, for a period of five years and from annual appropriations of $10,000,000, from 40 to 90 per cent of

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the cost of construction and improvement of hospitals the plans for which shall have been approved by a National Hospital Advisory Council to be appointed by the Surgeon General of the Public Health Service with the approval of the Administrator of the Federal Security Agency. The amendment recognizes that operating costs may well be an important consideration by providing for federal contributions for maintenance during the five-year period, such contributions to be at a rate, during the first year, of $300 a bed for general and tuberculosis hospitals and $150 a bed for mental hospitals. During each of the succeeding four years the federal contributions will be at a rate per bed which is 20 per cent less than the rate during the preceding year.

According to the A. M. A. Journal, recognition is given in the amendment to the suggestions made by representatives of the American Medical Association at the hearing on the Wagner-George bill that the National Hospital Advisory Council be authorized to assume more important functions than that bill contemplated. Senator Taft proposes, in effect, that all important steps involved in his plan shall be taken only after approval by the council. Title to the hospital facilities to be constructed and maintained under the provisions of the amendment will lodge in the state or governmental subdivision, not in the federal government as proposed in the Wagner-George bill. Apparently it is contemplated, the Journal says, not only that new hospitals may be built but that additions to existing hospitals may be constructed as well in case this procedure will best serve the needs of a given community.

A. M. A. Approves President's Reorganization Plan No. IV

The activities of the Department of Labor dealing with the welfare of mothers and children should be transferred to the Public Health Service, *The Journal of the American Medical Association* for April 20 says in discussing federal reorganization plans. The editorial says:

"On April 11 President Roosevelt sent to the Congress Reorganization Plan No. IV, which consolidates certain federal agencies and activities. Certain sections of these proposals are of great interest to the medical profession, particularly as they represent an attempt to gather many widely distributed medical functions into a single agency, as recommended by the American Medical Association in its platform. Thus the President said:

"'Federal Security Agency: The Federal Security Agency has as its major purposes the promotion of social and economic security, educational opportunity, and the health of the citizens. The functions of St. Elizabeths Hospital, Freedmen's Hospital, Howard University, and Columbia Institution for the Deaf plainly come squarely within these purposes. Consequently, I find it necessary and desirable in pursuance of the objectives of the Reorganization Act to transfer to the Federal Security Agency the responsibilities of the Interior Department relating to these institutions. The work of St. Elizabeths Hospital and Freedmen's Hospital is much more akin to the activities of the Public Health Service in the Federal Security Agency than to those of any other Federal establishment. Similarly, Howard University and Columbia Institution for the Deaf can derive more benefit from association with the Office of Education in the Federal Security Agency than with any other Federal organization.

"'I further propose to transfer to the Federal Security Agency the Food and Drug Administration, with the exception of two activities intimately related to the work of the Department of Agriculture. The work of the Food and Drug Administration is unrelated to the basic functions of the Department of Agriculture. There was, however, no other agency to which these functions more appropriately belonged until the Federal Security Agency was created last year. I now believe that the opportunity for the Food and Drug Administration to develop along increasingly constructive lines lies in this new Agency. There is also need for coordination of certain of its functions with those of the Public Health Service. To accomplish these objectives the plan establishes the Administration as a separate unit within the Federal Security Agency.

"'In concluding his message the President pointed out that 'the reorganization plans thus far submitted do not exhaust the transfers, consolidations, and abolitions that may be necessary and desirable.' He pointed out also that the act expires on Jan. 20, 1941, and he strongly recommended the reenactment of the Reorganization Act without exemptions so that the structure and management of our government, like the activities and services it performs, might be kept abrest of social and economic change. Perhaps the President has in mind those functions of the Department of Labor particularly concerned with the welfare of mothers and children which belong far more appropriately with the United States Public Health Service.'"

Industrial Physicians and Surgeons to Meet

The twenty-fifth annual meeting of the American Association of Industrial Physicians and Surgeons, together with the first annual meeting of the American Industrial Hygiene Association, will be held at the Hotel Pennsylvania, New York City, June 4, 5, 6, and 7, 1940.

This will be a four-day convention intensively devoted to the problems of industrial health in all of their various medical, technical, and hygienic phases, with particular stress on prevention and control of occupational hazards.

Important programs have been prepared, and technical and scientific exhibits will be a feature of the convention. The dinner of Thursday evening, June 6, will be the occasion of the presentation of the William S. Knudsen award for the year of 1939-1940.

Lilly Establishes New Fellowship

The committee on the chemistry of proteins of the division of chemistry and chemical technology of the National Research Council has received a grant of $3,600 from Mr. Eli Lilly, Indianapolis, for the establishment of a fellowship in protein chemistry. Isidor Fankuchen, Ph.D., has received the fellowship to continue x-ray research on proteins at the Massachusetts Institute of Technology.

The role which extremes in temperatures play in reducing resistance to colds is explained in *Hygeia, The Health Magazine*, which states: "Overheating causes drying of the mucous membranes of the nose and throat, increasing the ease with which germs may invade it. Chilling may produce congestion in the nose and thus make it easier for infection to take place."

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Our recent publication, "Benzedrine Sulfate Tablets in Depressive Conditions"— examined and found acceptable by the Council on Pharmacy and Chemistry of the American Medical Association—summarizes the findings of leading investigators as to the present status of the drug in this field. Excerpts are cited from the articles listed below:

Guttmann, E. and Sargant, W.: **Observations on Benzedrine**—Brit. Med. J., 1:1013, May 15, 1937.

Nathanson, M. H.: **The Central Action of Beta-aminopropylbenzene (Benzedrine)**—J.A.M.A., 108:528, Feb. 13, 1937.

Myerson, A.: **Effect of Benzedrine Sulfate on Mood and Fatigue in Normal and in Neurotic Persons**—Arch. Neurol. & Psychiat., 36:816, Oct., 1936.

Wilbur, D. L.; MacLean, A. R. and Allen, E. V.: **Clinical Observations on the Effects of Benzedrine Sulphate**—Proc. Staff Meet. Mayo Clin., 12:97, Feb. 17, 1937.

Woolley, L. F.: **The Clinical Effects of Benzedrine Sulphate in Mental Patients with Retarded Activity**—Psychiatric Quart., 12:66, January, 1938.

Davidoff, E. and Reifenstein, E. C., Jr.: **The Stimulating Action of Benzedrine Sulfate**—J.A.M.A., 108:1770, May 22, 1937.

Guttmann, E.: **The Effect of Benzedrine on Depressive States**—J. Ment. Sci., 82:618, Sept., 1936.

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6,043 Physicians Are Added To Roster During 1939

There were 6,043 physicians added in 1939 to the number practicing in the United States, its territories and possessions, the thirty-eighth annual compilation of medical licensure statistics by the Council on Medical Education and Hospitals of the American Medical Association reveals in the report published in the Association's *Journal* for April 27.

Commenting on this figure and the status of medical licensure, *The Journal* says:

"Here is no indication of a dearth of doctors. Quality, however, is more important than quantity and in this respect the situation is far from satisfactory. One hundred and ninety-five graduates of unapproved schools were admitted to practice in thirteen states, Massachusetts, Illinois, Ohio and New York heading the list. In these four states there were licensed, respectively, seventy-nine, fifty one, thirty-six and twelve graduates of unapproved medical schools.

"A still more serious degradation of the standards of medical practice results from the trend in recent years to abolish the restrictions which have heretofore governed the practice of osteopathy. In seven states medical licenses have been issued to 118 osteopaths who are not graduates of any medical school. New Jersey has issued forty-five such licenses and Texas thirty-six. Law making bodies seem to have forgotten that when osteopathy was seeking legal recognition its advocates stoutly maintained that it was a system of healing having nothing to do with medicine and that it would be most unjust to require practioners of osteopathy to undergo the same training and meet the same educational requirements as doctors of medicine.

"Medical journals and the public press have commented on the numbers of medical licenses issued to graduates of schools outside the United States and Canada. Twenty-eight states and the District of Columbia licensed 925 graduates of foreign schools, New York heading the list with 497; New Jersey with eighty-five and Illinois with eighty placed second and third. Some of these 925 foreign graduates are citizens of the United States who studied abroad because they had failed to secure admission to medical schools in this country; the majority are Europeans who sought asylum in the United States."

The compilation is based on official reports from all medical licensing boards of the United States and its territories and possessions. It also contains data obtained from and pertaining to the boards of examiners in the basic sciences, those in medical specialties and the National Board of Medical Examiners.

Regarding the additions to the profession during 1939 the report says the figure represents, in the main, recent graduates and it can be assumed that a great majority of them are in practice. "The number removed by death," the report states, "annually approximates 4,000. It would appear, therefore, that about 2,000 were added to the medical profession in 1939."

During the year there was a total of 9,260 licenses issued, out of which 6,043 were additions to the profession. The largest number added to the profession in any one state was 1,162 in New York. Illinois added 485 and Pennsylvania 476. More than 300 received their first license in California and Ohio while the physician population in Massachusetts, Michigan, Missouri, New Jersey and Texas was increased by between 200 and 300. The increase in Indiana, Maryland, Minnesota, Tennessee, Virginia and Wisconsin was between 100 and 200 while less than 100 were added to the number in thirty-two states, the District of Columbia, the Canal Zone, Hawaii and Puerto Rico.

The increase in 1939 was 210 less than that in 1938 and also less than in any year except 1935 when it was 533 under the 1939 figure.

Grouped geographically, the largest increase in physician population was 1,848 in the Middle Atlantic states. The East North Central group had a total of 1,296, the West North Central 626, South Atlantic 612, the Pacific states 430, New England 426, West South Central states 384, East South Central 296 and the Mountain states 111.

The additions to the profession in 1939 included graduates from sixty-seven approved medical schools of the United States, nine approved schools in Canada, and others. The greatest numbers from any one school were 159 from the University of Illinois College of Medicine, 145 from the University of Pennsylvania School of Medicine and 137 from Northwestern University Medical School.

The efficiency of medical education in approved schools is revealed by the fact that there were 5,379 graduates of approved medical schools in the United States examined, of whom 2.8 per cent failed; 156 graduates of approved Canadian medical schools, 7.1 per cent of whom failed; 1,692 graduates of schools outside of the United States and Canada, principally in Europe, with 50.4 per cent failures; seven who graduated from medical schools now extinct with 28.6 per cent of failures, and 519 from unapproved and osteopathic schools, of whom 47.2 per cent failed. These 519 represented 168 graduates of osteopathic schools, of whom ninety-eight passed and 41.7 per cent failed; 351 graduates of unapproved schools, of whom 176 passed and 175, 49.9 per cent, failed. Graduates of osteopathic schools were examined by the medical boards of eight states, Colorado, Connecticut, Massachusetts, New Hampshire, New Jersey, Oregon, Texas and Wyoming, while graduates of unapproved schools were examined in eight states and Puerto Rico.

Albany Medical College and the University of Buffalo School of Medicine had the highest percentage of failures in the United States, 20.0 and 22.6 per cent, respectively. Fifteen schools in the United States had no failures before medical licensing boards, thirty-seven schools less than 5 per cent, nine between 5 and 10 per cent and six more than 10 per cent. The fifteen with no failures were the Universities of Colorado, Yale, Indiana, Louisiana State, Michigan, Nebraska, Ohio State, Cincinnati, Western Reserve, Oklahoma, Oregon, Pittsburgh, Vanderbilt, Texas and Wisconsin.

The fourteen approved examining boards in medical specialities have awarded certificates to 15,597 physicians, the report shows.

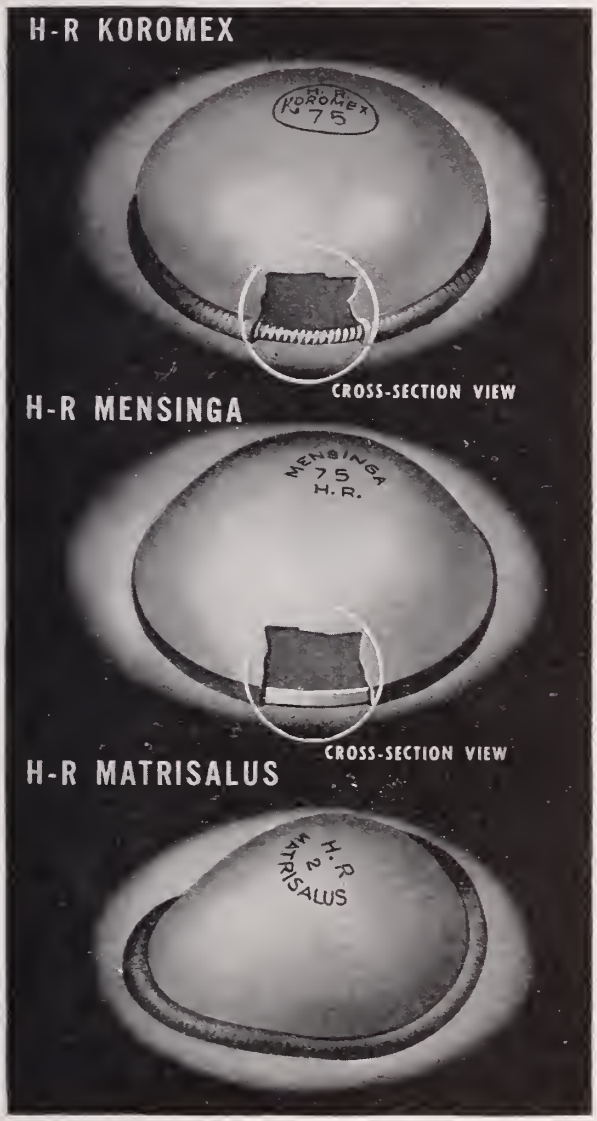
A certificate in the basic sciences is a prerequisite for licensure in fourteen states and the District of Columbia. The subjects included in the examinations are specified by statute and vary in the different states. All boards examine in anatomy, pathology and physiology: thirteen examine in chemistry, eleven in bacteriology, seven in hygiene, two in diagnosis and one in hygiene and public health. In 1939 the fourteen boards examined 1,359 candidates. Of this number, 1,141 were doctors of medicine, 114 osteopaths and twenty-seven chiropractors; for seventy-seven it was not possible to determine what profession they represented, the report says. Of all examined, 18.3 per cent failed. The failures among physicians were 11.2 per cent; osteopaths, 43.9 per cent; chiropractors, 77.8 per cent, and the unclassified, 65 per cent.

"The object of basic science boards is to provide a means of insuring that all candidates seeking the right to care for sick and injured people shall first possess a reasonable knowledge of the sciences fundamental to the healing art," the report states.

A total of 7,437 certificates have been granted, up to and including 1939, by the National Board of Medical Examiners since it was founded twenty-five years ago.

The report points out that its greatest accomplishment has been the acceptance of the certificate as a qualification for licensure by forty-three states, the District of Columbia and four territories.

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Early Reservations for A. M. A. Session

Reservations for the annual session of the American Medical Association in New York are beginning to be received in large numbers, advises the Journal of the American Medical Association. From advance information gathered at medical meetings and from members throughout the United States, the attendance at the New York session probably will surpass even the largest attendance ever recorded at a previous convention of the American Medical Association.

The Housing Committee suggests that even though an American Medical Association convention has never been held in a city where so many hotel rooms are available, reservations should be made immediately in order to get accomodations in the hotel desired and at the rate requested.

The low railroad rates as a result of the World's Fair will prove an added attraction and the special American Medical Association days designated by the New York World's Fair on Friday and Saturday, June 14 and 15, are another inducement for attendance at the 1940 convention.

Annual Kober Lecture Given

Dr. William G. MacCallum, Baxley professor of pathology, Johns Hopkins University School of Medicine, Baltimore, delivered the annual Kober lecture at Georgetown University Medical School, Washington, D. C., March 28, on "Pathology of the Parathyroid Glands." He was presented with a certificate and honorarium of $500 provided by the Kober Foundation.

The speaker for this lecture is selected in alternating years by the Medical Society of the District of Columbia, the Association of American Physicians and the Association of Military Surgeons. The lecture commemorates the late Dr. George M. Kober, Washington, and is given on his birthday.

Medical Exports in Recent Months

"Under the international conditions existing at the present time there are few countries in which research, industry and commerce are proceeding normally," *The Journal of the American Medical Association* for April 20 says in commenting on medical exports in recent months.

"Where production is unhampered, business will be greatly accelerated by the concentration of demand to areas functioning in the normal manner. A case in point is the production and export of medicinals by the United States. Long enjoying a favorable position in this field, this country during December 1939 showed an increase of more than 50 per cent in the export of medicinals and pharmaceuticals over that in December 1938, according to the Chemical Division of the United States Bureau of Foreign and Domestic Commerce. An index of the rapid recent acceleration in this trade is provided by the high value of $9,574,000 for the exports during the last four months of 1939, a 65 per cent increase over a similar period of the preceding year. Almost every country and trading area in the world has supported this peak level of foreign demand for American medicinal products (particularly biologic products and unbranded nonproprietaries) since the outbreak of hostilities in Europe."

Competition for Wellcome Medal Announced

The Association of Military Surgeons of the United States announces the annual competition for the Wellcome Medal and prize of $500, established by the late Sir Henry Wellcome for research on subjects helpful to the objects of the Association.

The topic chosen for this year is "Medical and Sanitary Care of the Civilian Population Necessitated by Attacks From Hostile Aircraft." Five copies of the essay must be in the office of the association in Washington, D. C., by August 20. The medal will be awarded at the annual meeting in Cleveland, October 10-12.

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SURGERY AND GYNECOLOGY

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"The Surgical Treatment of Acute Cholecystitis and Common Duct Obstruction." By Professor Dr. Hans Finsterer, Vienna, Germany. Surgery, Volume 6, Number 4, October, 1939, Page 491.

Coming from a large recognized clinic such as Professor Finsterer's, his ideas in regard to this condition must be given serious consideration, even though one cannot agree with some of his conclusions.

He is an advocate of early operation in acute cholecystitis. In this article he sets forth his arguments in favor of this plan. Many of his ideas are already well known and have been the subject of much discussion in American Surgical circles.

The following rules which he has set down for the treatment of common duct obstruction by stones are of considerable interest:

1. In all cases the diseased gall bladder is removed.

2. If the common duct be occluded by a solitary stone and the papilla be permeable, the common duct is sutured after extraction of the stone and only the abdomen is drained.

3. If the papilla be stenosed and not dilatable, choledochoduodenostomy is applied.

4. If apart from the obturating stone there are additional stones but no infection, the common duct is sutured, "provided I can be sure that all stones have been removed."

5. If in a case of common duct obstruction with fever of short duration purulent bile is found, the common duct is drained after removal of the stone, an anastomosis being difficult and dangerous because of the thin wall of the common duct.

6. If the trouble continues, the choledochoduodenostomy is performed at a second operation.

7. With multiple stones in the common duct, purulent cholangitis, relative stenosis of the papilla by cicatrices or chronic pancreatitis, a side-to-side anastomosis 2 cm. long is made between the common duct and the duodenum. In these cases the abdomen is always drained.

LeRoy D. Long

"The Use of 2-Methyl-1, 4-Naphthoquinone (A Synthetic Vitamin K Substitute) in the Treatment of Prothrombin Deficiency in Patients." By J. E. Rhoads, M.D., and M. T. Fliegelman, M.D. The American Medical Association Journal, February 3, 1940. Vol. 114, No. 5, Page 400.

The isolation of vitamin K in pure form has led to the discovery that several simpler naphthoquinones share the antihemorrhagic properties of vitamin K. The most potent of the synthetic preparations so far assayed is 2-methyl 1, 4-naphthoquinone.

Ten patients with demonstrated prothrombin deficiencies were treated with 2-methyl-1, 4 naphthoquinone. They all received bile salts, either in the form of iron bile salts (Lilly) or of sodium deoxycholate (Riedel-De-Haen).

Three of the patients in whom a satisfactory response was obtained had failed to respond satisfactorily to various forms of Vitamin K. All but one of the ten patients responded satisfactorily to doses of from one to four milligrams a day orally.

In three cases hemorrhagic phenomena occurred before the first dose was given. In all these the hemorrhage was controlled.

2-Methyl-1, 4, naphthoquinone appears to be the most potent agent for the treatment of prothrombin deficiency so far employed clinically.

No toxic effects were observed in this group of patients.

As the absolute amount of each of these substances needed for the formation of prothrombin is very small, it is probable that cost, ease of administration, uniformity of results and absence of toxic effects will ultimately determine which of them will be most generally used.

LeRoy D. Long.

"Clinical Aspects of Protruded Intervertebral Disk." By Harry B. Macey, M.D., Rochester, Minnesota. Archives of Surgery, Volume 40, Number 3, March, 1940, Page 433.

The credit for establishing posterior protrusion of the intervertebral disk as an entity is given to Mixter and Barr. The initial report of these authors was published in the New England Journal of Medicine on August 2, 1934.

The author of this article does not wish to imply that all posterior protrusions produce symptoms, but he believes that a protrusion of sufficient size, "advantageously placed" may produce pathologic changes in the nerve roots or the cauda equina sufficient to convince the most skeptical of its clinical significance."

The conclusions of the author are based upon the investigation of a group of patients treated at the Mayo Clinic in 1936 and 1937. When operation appeared to be advisable, it was done by the neurosurgical staff.

Speaking of the anatomy and mechanism of production, the reader is reminded that the intervertebral disk, or fibrocartilage, is composed of the annulus fibrosus and the nucleus pulposus. "The annulus fibrosus is composed of laminas of fibrous tissue and fibrocartilage and is so placed at the anterior and posterior intervertebral spaces as to confine the nucleus pulposus between the vertebral bodies. The nucleus pulposus, a soft, elastic mass of fibrous tissue, is confined superiorly and inferiorly by the cartilaginous plate covering the inferior and superior portions of the vertebral bodies anteriorly by the annulus fibrosus. It is confined under pressure and acts in the capacity of a shock absorber, or cushion, for the vertebral bodies."

The nucleus pulposus, normally circular in shape, changes shape under pressure, "and there is a corresponding change of the annulus fibrosus to compensate for the changing nucleus." At the same time there is a change in the position of the bodies of the vertebrae, with disturbance of the equalization of pressure. When there is pressure enough upon the annulus fibrosus to produce great stretching and rupture there must be application of force over the spine with the spine in flexion.

In connection with this mechanism, attention is directed to simultaneous stretching or damage of the posterior longitudinal ligament. The rupture is usually on one side but may occur in the midline.

Continuing to discuss the clinical-pathological phenomena, the author says, "The pathologic picture of a pos-

teriorly protruded disk is that of nerve compression.'' Parenthetically, he explains that by nerve compression he means that the protrusion has compressed a root laterally and posteriorly against the pedicle of the vertebra and on the ligamentum flavum, from a ruptured annulus fibrosus, an extruded nucleus, or a combination of the two. Pathologic examinations in 100 cases forming the basis of the study reported showed that the extruded material had the characteristics of fibrocartilage as a predominating feature. At operation the pathological appearance of the specimen was that of a firm, hard protrusion at the posterolateral intervertebral space. In some cases it appeared to be firmly adherent, and made it necessary to exercise it, even after attempted relaxation by section of the posterior longitudinal ligament.

''There may also occur, though rarely, extrusion into the canal of several fragments, which are fibrous particles of the nucleus pulposus. It would appear from the anatomic and pathologic pictures that the presenting tumefaction in this syndrome is due to protrusion of the necleus covered by the annulus fibrosus which has undergone fibrous changes. There may be an occasional case in which fibrous fragments of the dislodged nucleus becomes so placed as to produce nerve compression.''

In connection with the clinical history, low backache was practically always present, either continuously, or intermittently. In other cases there was pain in the distribution of the great sciatic nerve. In still other patients there was a combination of low backache and sciatic pain.

Paresthesia in the distribution of the lower lumbar and the sciatic nerve was a frequent complaint.

It was observed that the patient usually had pain only when the body or legs were moved, or when there were spasmotic efforts like those in coughing, sneezing, or attempted activity.

The very important and remarkable statement is made that ''The injury is frequently trivial and seemingly insufficient to cause an acute rupture of the annulus fibrosus.''

''From the pathologic anatomy one must conclude that the protrusion results from an injury or injuries or possibly from disease, although so far as I know the latter has not been reported. The impression one gets in reviewing the cases is that injury is the basis of all posterior protrusions but that the degree of the injury or multiple injuries determines the clinical history and the clinical course of the syndrome.''

On physical examination, in 50 of the group of 100 there was unilateral limited ''straight leg raising.'' In 24 patients there was bilateral limited ''straight leg raising,'' and in 26 patients ''straight leg raising'' was considered normal. In 17 of the patients there was atrophy of either the buttock or the extremity or both.

On inspection of the body, there was list to the unaffected side in the more acute cases. Out of the 100 cases investigated, there was list to the unaffected side in 33.

In 50 per cent of the patients there was tenderness over the lumbosacral joint, and in 80 per cent of the patients examined there was definite limitation of motion, particularly in flexion of the spinal column.

''Of 98 cases in which fluroscopic examination with radiopaque oil was done, there were 93 in which a positive defect was found, 4 in which the procedure was a failure and one in which a protruded disk was found at the interspace between the fourth and fifth lumbar vertebrae at operation after the results of roentgen examination had been reported as negative.''

In referring to the report of Camp that by the use of radiopaque oil accurate diagnoses have been made in 92.3 per cent of 210 cases observed at the Mayo Clinic, it is remarked that air studies are now mostly employed because of a radiculitis that sometimes follows the introduction of oil.

The larger proportion of the protrusions occurred at the fourth and fifth lumbar inter-space. There were eight at the third and fourth lumbar interspace and one at the second and third lumbar interspace. There were multiple protrusions in the cases of four patients. ''Of this group there were 28 midline or bilateral protrusions of the disks. Each of the remaining 72 protrusions was unilateral.''

There was a diminished achilles tendon reflex in the majority of the patients but the author does not believe that the finding of a diminished achilles tendon reflex is a uniform finding.

Treatment consists of laminectomy and removal of the ligamentum flavum and the disk, the articular facets being preserved.

Finally, it is wise to have an orthopedist as a consultant.

Comments:—One most striking characteristic in connection with pain associated with protruded intervertebral disks is that the patient has pain only when there is activity on the part of the body or extremities. We now have a patient under observation who illustrates this characteristic which has been mentioned by the author of the article. This patient says that he stays in bed most of the time because he is afraid to move. If he lies down and is perfectly quiet he does not have pain, but if there is the least movement of the body there is low back pain of a most annoying character. When we examined him we found that he had been taking large doses of phenobarbital at night. On questioning him it was learned that he was able to sleep when he did not have pain, but that if he did not have something to make him sleep he would involuntarily move the body and the pain would be so excruciating that he was not able to rest. He was in our clinic one day, and for a short time was left in a room alone. He appeared to be very tired. When he was seen after a short space of time he was lying down on the floor. His explanation was that that was the only way he was able to secure relief from pain, and since there was no arrangement for examination in the particular room where he was left — no examining chair — no tables — he did the next best thing, which was to lie down on the floor.

Some of these patients have pain definitely localized in the back, usually much more on one side. Aside from weakness and paresthesia, they may not have suggestive complaints with reference to the leg. In this same journal carrying the article of Dr. Macey, there is a good explanation of that by Spurling and Grantham, of Louisville, Kentucky. They say, ''With tearing of the annulus fibrosus and the subsequent inflammatory reaction therefrom, the sensory nerve endings, with which the structure is richly supplied, are stimulated; hence the pain in the back. The pain remains localized to the back unless the tear is sufficiently large to permit extrusion of the nucleus pulposus or detached portions of the annulus fibrosus into the spinal canal.''

Finally, the implied warning against the indiscriminate intra-spinal injection of radiopaque oil should receive the most careful consideration, because the radiculitis which sometimes follows its employment may be not only disturbing, but may completely incapacitate the patient.

LeRoy Long, Sr.

"Helpful Words From Older Doctors." By W. A. Newman Dorland, M.D., F.A.C.S., Chicago, Illinois (By Invitation). Clinical Medicine and Surgery, March, 1940. Volume 47, No. 3, Page 91.

This is the first of a series of interesting and practical articles under the heading listed above.

All of the articles in this group (some eight or ten) are good, but in this abstract my remarks will be confined to the article of Dr. Dorland for three reasons: 1. He is a distinguished member of the medical profession. 2. He is a medical lexicographer of wide renown. 3. He has been in the active practice of medicine for fifty-four years. With these qualifications as a background, any statement from him should receive careful attention.

His first statement has been made repeatedly, but

regardless of its repetition it has never been made by one more able to speak authoritatively than this distinguished member of the medical profession. Briefly, the statement is that when a young doctor leaves hospital he is just getting ready to learn how to practice medicine. This emphasizes the necessity of preparation in fundamental knowledge to the end that he will be able to make practical application of such knowledge because "he soon learns that he does not know it all, as he is so apt to imagine." It is indicated that even those who are sincere and earnest are appalled at their ignorance of many matters which are essential to true success. "True, he has acquired a smattering of experience in his dealings with the hospital patients under the tutelage of the visiting staff; but now that he is on his own, with the entire responsibility resting upon his shoulders, it is quite another matter."

It is advised that the young doctor of medicine acquaint himself with as much practical information as possible, and it is indicated that the most valuable and usable material is often found in the smaller medical journals "which are mainly devoted to the clinical practice of medicine."

"It is not the ultra-scientific papers, interesting and instructive as they are, that are most valuable to the young doctor." It is advised that such papers should be read and studied in leisure time, "but clinical reports and therapeutic articles yield for him the larger quantity of useful pabulum." The young doctor is advised to begin, early in his career, the collecting and grouping of current medical literature, such as reprints, and to systematically build up a usable library.

While engaged in the practical every-day pursuits, fundamental things, such as autopsy findings, should not be neglected. In this connection, the following statement is made: "Pathology, even more than clinical experience, is the true basis of a successful medical career."

Membership in medical societies, and the discussion of medical problems in such societies are emphasized.

"If possible, he should associate himself with the professors in their clinics, in order to learn the prevalent methods of treatment and the points of differential diagnosis. Thereby he will keep abreast of the times."

Specialization should be approached with great deliberation. "Many a truly good man has been handicapped by entering a specialty before he is really prepared for it."

Here is a most practical statement: "He (the young doctor) must remember that the various systems of the body are not packed together inside of the skin as distinct and sharply defined organs. On the contrary, they are overlapping and intimately associated one with the other, activating and influencing each other to a remarkable degree. It is the knowledge of this fact which will often clear up an obscure clinical condition; and it is just here that brilliant diagnoses are made, which the man not informed of the interrelation of the systems will be unable to make, save by mere chance."

LeRoy Long, Sr.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
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"Sala (Palermo).—Ocular Changes Due to Stovarsol." (Alterazioni oculari da stovarsol sodico). Annal. di Ottal., March, 1939. Abstract published in the British Journal of Ophthalmology, January, 1940.

All arsenic compounds are more or less dangerous to the eyes; it has been stated that stovarsol is less dangerous than others and on this account it has been pronounced to be the drug to be selected when it is desired to give arsenic. Some disasters have been recorded even with this compound. Its composition is acetyl-amino-oxyphenylarsenic acid, and it is pentavalent.

Sala wished to examine the toxicity of stovarsol and chose for experiment, the sodium salt; he injected a solution intravenously into rabbits, in some cases with the addition of some quantity of alcohol. After some months of treatment, the animals were killed and the eyes and optic nerves examined; he found evidence of atrophic degeneration of the retina and also of the optic nerve. He concluded that the prolonged administration of stovarsol is not devoid of risk, especially when the patient is in poor condition.

"Acute Osteomyelitis of the Superior Maxilla in Young Infants." N. Asherton, London. The Journal of Laryngology and Otology, December, 1939.

Four such cases are reported in this article. In spite of the relative rarity of this condition it can be readily identified. It is caused by a staphylococcic infection of the socket of the unerupted first deciduous molar tooth, and the adjacent part of the anterior surface of the superior maxilla. In the four cases reported the involvement started as above stated and spread rapidly in all directions. The lachrymal apparatus is usually not involved. If the case is late when seen or surgical intervention is not made soon enough, the result is multiple fistulae. Sequestra are extruded spontaneously and the fistula may persist until removed by operation.

This is a rare condition, there being only about seventy cases reported in the literature. The source of the infection is not definitely known. Such sources as birth injuries, infection from the attendant nurse or doctor, or infection from other parts of the body (umbilicus) which already have a staphylococcic foci are mentioned. The socket of the unerupted tooth is actually larger than the maxillary antrum in the young infant. The majority of the cases occur from the time of birth up to twelve weeks; rarely in infants eighteen months of age.

The onset is sudden. There is temperature, lids swollen and odematous, eyes are swollen closed, proptosis, ophthalmoplegia, unilateral purulent nasal discharge, induration and swelling of the cheek, palatal swelling in juxtaposition with the alveolus, severe constitutional signs and symptoms. The x-ray at this stage is usually negative. Later after sequestra formation x-ray shows nicely. Staphylococcus usually can be cultured from the nasal dicharge. The acute stage usually lasts about ten days. After the rupture or drainage of the pus the temperature drops and the patient then enters the chronic or indolent stage of fistula formation and the sequestration of dead bone. This stage may last for months if adequate surgical intervention is not instituted.

The characteristic features in the diagnosis are: Swelling of the cheek; swelling of the canine fossa; swelling of the hard palate; fistula followed by sequestra formation; and presence of staphylococcus in the discharge. These are similar signs to those which are produced by an orbital cellulitis secondary to acute antro-ethmoidal infection in infants. However, the latter condition is apt to occur in older infants and children. There is a table of eleven differeutial points of diagnosis of the two above mentioned conditions. Of the four cases reported by the author, one patient died, giving a mortality rate of 25 per cent. Others report this as about the correct percentage of mortality.

The treatment is immediate operation by an external route. The operation is outlined during the acute and also during the chronic or indolent stage. This is given in much detail. The cases are reported in detail from the time of the first examination to culmination of the course of the disease. Beautiful and instructive illustrations accompany the article.

"The Status of Retrobulbar Neuritis in Paranasal Sinus Disease." James B. Costen, M.D., St. Louis, Mo. The Southern Medical Journal, February, 1940.

According to the author, the optic nerve in 75 per cent of the cases passes through the upper and outer

anterior part of the sphenoid sinus. The bone, if any, protecting the nerve at this point is very thin. The nerve may also be poorly protected in the ethmoid region. It is easy to see how inflammation and pressure and infection may directly affect the optic nerve due to its placement anatomically. If there is a resection of the posterior sinuses and the eye lesion recovers rapidly, then the author assumes that the process is one of (a) drainage of infectious material away from intimate contact with the optic nerve; (b) decompression of the nerve by free incision of many adjacent blood and lymphatic vessels; (c) relief from direct pressure by engorged membranes and by another reasoning; (d) production of hyperemia which restores the blood supply to the nerve which has been lost in the pressure effects from swelling within the bony canal or in the thrombosis of the small vessels supplying it.

This is quite a controversial subject, both as to a correct diagnosis of retrobulbar neuritis and as to whether or not surgical intervention is of value. From 1908 to 1915 many cases were reported in the literature giving the sinuses as etiological factors in retrobulbar neuritis. There were mentioned other toxic causes such as tobacco, alcohol, chemicals, and such constitutional diseases as diabetes, lues, rheumatism, pellagra and tumor. A disease that is hard to eliminate from the differential diagnosis is that of multiple sclerosis. Not infrequently cases reported as retrobulbar neuritis have been confirmed much later as multiple sclerosis. It has been stated by some authorities that 90 per cent of the cases of retrobulbar neuritis will recover spontaneously. In 1927 Oliver and Crowe reported ten cases of retrobulbar neuritis in which tissue removed from the posterior ethmoid cells showed myxomatous degeneration and cellular infiltration of the mucous membrane. McMahon described similar changes occurring in sphenoethmoid sinusitis.

Benedict, in 1933, analyzed 225 cases of retrobulbar neuritis examined in the Mayo clinic: 155 were found to be due to multiple sclerosis and the remainder to various toxic effects, with only one case claimed by sinus disease. In 500 cases of proven multiple sclerosis, 60 per cent had had intranasal operations performed elsewhere. Lillie, in 1934, reviewed the same series of cases, and did not consider the sinus infection as an important etiologic factor.

The author reports thirteen patients whose visual disturbances were suspected to be due to absorption from toxic foci about the nasal sinuses. The author says: "The most important conclusion which may be drawn simply indicates the preponderance of lesion of the retina and choroid which respond to surgical drainage of the sinuses rather than retrobulbar neuritis." He suggests that the terminology as applied to the eye lesions in connection with nasal infections and nasal surgery is probably loosely applied.

"Nasal Sinusitis: Evaluation of Therapeutic Procedures With Special Reference To Conservative Management." A. R. Hollender, M.D., F.A.C.S., Miami Beach, Florida. The Eye, Ear, Nose and Throat Monthly, February, 1940.

The author chooses this difficult question evidently with some misgivings, for he states: "A recent symposium on nasal sinus disease brought out a diversity of opinions which exists today as it did twenty-five years ago." As in the past the swing of the pendulum indicated surgical procedures almost universally, now more conservative methods are being advocated and used, just as successfully. The meaning of the word, conservative, as the author uses it, is discussed. He cites the fact that he would term an intranasal operation on the maxillary sinus, conservative treatment, under certain circumstances. More knowledge as regards nasal and sinus physiology have helped to change the trend of treatment as well as the unsuccessful attempts at a cure by means of surgery of one type or another.

The postural instillation of isotonic solutions in the nose is foremost among therapeutic innovations. Hays advocates the suction-douche method of treatment. Fox, Harned and Peluse used the irrigation with posterior suction with gratifying results. The Dowling tampons are still used by some in acute and chronic sinus disease. Infra-red and ultraviolet are used with varied opinions as to the result obtained. As to short wave diathermy the author's opinion is that: 1. Short wave diathermy is not in itself sufficiently effective in acute sinusitis to be employed to the exclusion of other recognized therapeutic procedures. 2. It is not a curative method of treatment of chronic sinusitis, when used either alone or in combination with other nonsurgical measures. 3. It is an effective aid to indicated accepted procedures in acute sinusitis, hastening the abatement of symptoms and shortening the course of the disease.

Vaughn claims that many so called sinus cases are really allergic. It is reasonable to suppose that when examination shows a pale, boggy and swollen mucous membrane in the nasal passage that a similar condition exists in the sinuses themselves. Intranasal treatment will not relieve the boggy membrane in the sinus. This type of case requires a great deal of effort and time if the best results are to be obtained and useless surgery avoided. Bloom reports good results with the use of potassium in allergic sinusitis. The endocrine basis for allergy cannot be ignored.

If there is a vitamin deficiency upper respiratory infections are more liable to occur. The use of vitamins indiscriminately is of course fallicous. It would seem from the present state of knowledge that vitamins A and C are the most closely related to the development and maintenance of resistance to infection.

Irrigation of the antrum is of great value and should be used when indicated, but the continuous use of aqueous nasal irrigation produces a deleterious effect by water logging of the membranes which results in constant, excessive, mucopurulent discharge.

The author does not believe that surgery must be excluded for if there is a polypoid mass in the sinus, nothing but surgery will effect cure. It is the borderline case that brings so much diversity of opinion. A dogmatic attitude should not be taken as regards the treatment of sinusitis. Individualization of treatment gives the most successful results. Consitutional treatment is important in an acute sinus infection: — rest in bed — increased elimination — alkalization — large fluid intake—foreign protein therapy—mild anodynes of sedatives. The maintenance of ventilation and adequate drainage are of prime importance. Change of climate is sometimes helpful but it is erroneous to believe that change of climate in itself will effect a cure.

The author's conclusions are: "The introduction of several new non-surgical procedures and their successful utilization in the treament of nasal sinusitis have changed our views concerning sinus therapy. As the relationship of allergy to sinus disease is being more thoroughly appreciated, the trend toward conservative management is constantly increasing. Surgery in nasal sinus disease is an issue only in borderline cases. The scientific utilization of non-surgical procedures seems proper so long as the situation is not critical and no hazard is added by the time element required. When, however, the indications are absolute, surgery cannot be avoided, and no effort should be made to replace it by inadequate therapeutic substitutes."

PLASTIC SURGERY

Edited by George H. Kimball, M. D., F. A. C. S.
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"Paralysis of the Lower Lid and Scleral Scars and Grafts." Vilray P. Blair, M.D., F.A.C.S., & Louis T. Byars, M.D., St. Louis, Mo. S. G. & O. February 15, 1940.

PARALYSIS OF THE LOWER LID

Paralysis or destruction of the muscles of the lower

lid presents a much more distressing situation than a similar condition in the upper lid. Elevation of the latter may be accompanied by overactivity of the levator muscles. As long as the tone of the lower lid is present loss of muscular activity is practically unnoticeable, especially if there is any resistance of involuntary lid movement. But when the tone is lost the paralyzed lid begins to sag, the lid loses contact with the globe and there is distinct discomfort. When the upper lid is flaccid there is no tendency for the lid to separate from the globe as both gravity and a potential vaccuum act to maintain contact. The lower lid however has an early separation of the lid and the eyeball since gravity, which is a help in the upper lid, will pull the lower lid away. The immediate reaction to even a slight separation of the tarsus is a sense of discomfort which may develop into a distinct irritation or inflammation when particles of dirt or grit accumulate in the space formed between the globe and the lid. Excessive tearing also may result.

The most common cause of lid paralysis is total or partial loss in continuity of the seventh nerve while in some cases it is due to a local destruction of the muscle, a binding scar or a depressed lower orbital border.

Reconstruction of these cases must be highly individualized.

In this report several plans of repair are given with adequate illustrations. These include external canthotomy, living fascial slings, rebuildiug with pedicle grafts and the insertion of autogenous cartilage grafts.

SCLERAL SCARS AND GRAFTS

Scars within the conjunctival sac may compromise normal vision by limiting proper lid clearauce or free movements of the globe, aud in addition may cause actual discomfort. These are most commonly caused by chemical burns, lye in children, and acids in adults. Trauma and infection will account for a few. For the surgical corrections of the symptoms the scar must be divided or removed and the loss of conjunctiva must be replaced, either by shifting of the conjunctiva which is present or by free grafts. No mucous membrane grafts were used by these authors.

Procedure used here is careful division of scar tissue with very little removal of scar especially from the sclera using extreme care not to perforate the eyeball. The material used for replacement was thin split grafts. The technique used by the authors is that of a stint or inlay graft using a soft paraffin as a form. Paraffin was found to be the best in these cases because of its resilliancy and lack of maceration as occurred in cotton forms. The most important part in this procedure is to use care in protection of the cornea seeing that it is not scratched nor touched with dry cotton or the finger tips.

Post-operative care is essential. The eye must be dressed with moderate but not severe pressure and the cornea protected by a heavy layer of vaseline. For a few days both eyes must be covered to limit movement. Barring indications to the contrary the first dressing is left undisturbed for three to four days, but if real pain develops, the dressing should be removed for inspection.

This article reports four cases which have beeu successfully treated in this manner; however, they report some complications from corneal ulcers which they feel can be avoided in future work.

Comment: This is an exceedingly interesting article in a very important phase of reconstructive work. Frequently severe destructive lesions of the eyelids are encountered. The lesions should be reconstructed in order for the patient to continue his normal occupation. Scleral scarring, symblepharon, may cause severe handicap and can be corrected by release of the scar and reconstruction of the defect with split grafts.

The technique is tedious and the entire operation should be planned step by step before it is begun.

"Construction of Artificial Vagina." Buford Word, M.D., Birmingham, Ala. Southern Medical Journal, March, 1940.

Doctor Word discusses first the embryological development of the vagina and gives the various theories of origin. It is stated that the exact embryological origin is confusing but that the origin of the vagina is probably from the mesoderm.

The operative procedures which have been devised to correct this anomaly are traced in the various methods and discussed breifly. The Wharton operatiou is discussed a little more fully. In this operation after the tissue planes are dissected and a bed is made for the constructed organ a Balsam wood prosthesis is used to maintain the cavity.

The author has modified this procedure in that he uses a silver plated prothesis constructed from the obturator of an anoscope. The obturator used in these cases is one and one-half inches iu diameter and four and one-half inches long. This is electroplated with pure silver 3/1000 inch in thickness. In addition to the change in this instrument the author plants 5 or 6 pinch grafts onto the head of the instrument so that the grafts would act as epithelial seedlings in the bottom of the cavity aud grow out to meet the epithelium growing in. He states he did this to shorten convalescence. The authors commeut in these procedures is to the effect that the embryological origin of the vagina is not definitely known; however, the authorities agree that it comes from the mesoderm or entoderm or both but not from the ectoderm.

The Wharton operatiou constructs a covering lined with this type of embryological tissue. The epithelium seedlings of mucous membrane transplanted are the same embryology as normal vagina. The author states that the organ cannot function properly with any other type of lining.

The author in conclusion recommends that the Wharton operation be used and that a silver plated prothesis aud pinch grafts be used and that a silver plated prothesis and pinch grafts are a helpful addition in this operation.

Comment: In selected cases of atresia of the vagina operative relief is duly indicated. This is a simple procedure and has been suucessful in these men's hands. It is certainly to be desired to some of the more extensive plans which have been devised for this operation.

CARDIOLOGY

Edited by F. Redding Hood, M. D.
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"Some Different Types of Essential Hypertension: Their Course and Prognosis." Modern Concepts of Cardiovascular Disease. March, 1940. Norman M. Keith, M.D., Henry P. Wagener, M.D., Nelson W. Barker, M.D., Rochester, Minnesota.

To avoid confusiug descriptive terms, the groups have been given numbers. We have considered the usual benign cases as belouging to group 1; those of more marked hypertensiou, without retiuitis, presenting few untoward symptoms as belonging to group 2; those of mild vasospastic retinitis as belonging to group 3, and those revealing the so-called malignant hypertension syndrome as belonging to group 4.

GROUPS

Diffuse arteriolar disease with hypertension, Group 1. The hypertension can be of long duration without causing symptoms and without impairing general health. Cardiac and renal functions continue to be adequate and changes in the retinal vessels are minimal. Albuminuria may be of a slight degree or may be absent and, in spite of the gradual development of hypertrophy of the heart, electrocardiologic examinations may give evidence

of normal findings for many years. The hypertension as a rule does not rise to extreme heights, and among many individuals falls to normal levels during sleep. With moderate protection of the vascular system, the prognosis is usually good.

Diffuse arteriolar disease with hypertension, Group 2.

Patients of this group have a higher and more sustained hypertension than those of group 1. They may complain of being more nervous than formerly, but their general health is good and their cardiac and renal functions are satisfactory. The changes in the retinal vessels are more marked than in group 1, but retinitis is not present. In a study of these patients, the impression is obtained that the disease is more progressive than in cases belonging to group 1.

Diffuse arteriolar disease with hypertension, Group 3.

In this group, the hypertension is often high and sustained. On palpation, diffuse changes in the arteries usually can be demonstrated such as thickened, rubber-like radial, brachial, superficial temporal, posterior tibial, and dorsalis pedis arteries. Although cardiac and renal functions may be adequate, sometimes there are minor alterations in function as indicated by dyspnea on exertion, characteristic changes in the electrocardiogram and nocturia. Nervousness, headache, and vertigo are often annoying symptoms, and visual disturbances may occur. Albuminuria and microscopic hematuria may be present. An important criterion is the presence of angiospastic retinitis, together with definite sclerotic changes in the arterioles, but edema of the disks is not present.

It is of great interest that, even in cases of group 3, there may be a remission in the activity of the pathological process. The patient feels better and stronger and headaches or vertigo may disappear. There is evidence in the retina of previously active retinitis and some small arterioles may even become obliterated.

Diffuse arteriolar disease with hypertension, Group 4.

All observers are agreed that patients belonging to this group are in a very serious condition. The characteristic symptoms are nervousness, asthenia, loss of weight, headache, visual disturbances, dyspnea on exertion, and nocturia. Also, there may be obvious neurologic lesions. The objective findings are persistently elevated blood pressure, palpable diffuse arterial thickening of the peripheral arteries, and retinal changes. The important retinal alteration is edema of the disks. There is also marked spastic and organic narrowing of the arterioles with diffuse retinitis. Albuminuria, cylindruria, and erythrocytes are usually present. Cardiac and renal functions may be adequate but, sooner or later, they become impaired. Associated with the terminal picture, there may be failure of the functions of the brain, heart, and kidney simultaneously. This fact suggests widespread anoxemia owing to decreasing arteriolar blood supply. We have observed a few cases of group 4 in which the course was very rapid. The significant symptoms were sudden severe headaches, gross hematuria and pains in the muscles, accompanied by a persistently high blood pressure, marked narrowing of the retinal arterioles without apparent sclerosis and absence of distinct changes in the arterioles of muscles.

To distinguish clinically between the four groups usually is not difficult. Some patients may have to be observed over several months to determine whether they belong to group 1 or 2. Because the arterioles throughout the organs of the bodies seem to be the chief point of attack and can be visualized readily only in the retina, the findings obtained on ophthalmoscopic examination are very important.

PROGNOSIS

The outlook for patients who have essential hypertension affords a striking example of the variableness of processes of the disease.

The prognosis for cases of group 3 and especially, for cases of group 4 is very serious. Because many more males than females belong to these two groups, the death rate is much higher among males than among females. A death rate, within one year, of 35 per cent, in cases of group 3, and 79 per cent in cases belonging to group 4, is in distinct contrast with that of 10 to 12 per cent in groups 1 and 2. The mortality rate in cases of group 4 approaches that found in certain forms of cancer.

COMMENT

In the present attempt to group cases of essential hypertension clinically, we realize that not all cases fall into one of the four groups mentioned. There are many patients who have this condition who have, in addition to arteriolar dysfunction, diffuse arteriosclerosis, more especially of the aorta and of the coronary and cerebral arteries. Atherosclerosis of these arteries may be the determining factor as to course and prognosis. With more knowledge relative to the occurence of atherosclerosis in such vital internal arteries and with the aid of more accurate diagnostic methods, these cases might be grouped in a much more satisfactory manner than is possible at present.

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D., F. A. C. S.
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In the February 15, 1940 issue of the Journal of Surgery, Gynecology and Obstetrics there is a very excellent symposium on the treatment of fractures and other trauma. A careful review of each of these articles would be in order for this Journal. However, this discussion will be limited to a few articles; one of which reemphasizes a common problem that faces all of us; that of primary and secondary tendon suture, a second a reasonably new method of the treatment of certain fractures of the upper end of the humerus.

"Primary and Secondary Tendon Suture; a Discussion of the Significance of Technique in Tendon Surgery." Michael L. Mason, Surg., Gyn. & Obst. Feb. 15, 1940, Vol. 70 No. 2A.

In the treatment of tendon defects, severance of tendons, aside from the obvious importance of sterile or aseptic technique, we have to develop the patience to work slowly and carefully so that our technique is also "atraumatic." Dr. Mason discusses instruments for use in tendon repair which are primarily small instruments without rough teeth, the use of fine suture material and fine needles. The skin is prepared by scrubbing with soap and water. The skin incisions of choice for work in the hand are discussed in some detail. Space does not permit detailed outline of these, but primarily let it be said that they should be made so that the resulting scar does not contract and leave loss of function. Incision must be made to avoid the midline of fingers, the wrist and must not run at right angle to flexure creases.

Important details during the operation, after preparation and the proper skin incision, include absolute hemostasis and in this the vessels themselves must be clamped and not the surrounding tissues. There must be no tissue devitalization whatsoever. The tendons must be accurately approximated and held there by appropriate sutures. Closure of the wound should be done very carefully. Special attention should be given the details of dressing the wound and to the postoperative care. Thorough knowledge of the manner of tendon healing is important.

Primary repair is always advisable if the surgeon is fortunate enough to secure the wound early enough, and if he can be certain that it is clean. If not, secondary repair may be undertaken as soon as the wound is free of bacterial contaminants, and the tissues of the hand have regained normal consistency.

"Treatment of Fractures of the Shaft of the Humerus By Hanging Cast." John A. Caldwell, Surg. Gyn. & Obst. Feb. 15, 1940, Vol. 70 2A.

Treatment of fractures of the humerus presents cer-

tain special elements due to the particular location and function of this bone. "(1) It is the most freely movable long bone. Articulated above with the scapula by a ball and socket joint, the humerus has movement in all directions, and its movement can be amplified by movement of the scapula. (2) Its entire function is that of a lever, so that nearly all stress is in tension or at an angle to its long axis. The bone has to stand comparatively little stress in compression. (3) When at rest while the person is standing, the axis of the bone hangs vertically and is influenced by gravity alone." Thus we can depart from common lines of treatment of fractures of long bones and utilize a special method.

In absolute fixation of the humerus the disadvantages of the spica or the air plane splint are obvious, particularly in the aged or the obese. These interfere with street clothing and frequently cause the person to be kept at home continuously. The author has used a modified treatment of these fractures for the past several years with great success. In fractures of the shaft of the humerus, of the surgical neck at times, excluding supracondylar fractures, he applies a heavy cast from the axilla to the wrist with the elbow at right angle. A ring of wire is placed near the thumb end of the cast so that a sling may be placed around the patient's neck. The weight of the cast, as a rule, is sufficient to cause the humerus to be pulled into a straight line when the patient is up. Usually in severe displacement the patient is first placed in bed with unbalanced traction until he is over shock, after which the cast is applied as described. The cast can be removed in three weeks and exercises begun very gradually.

The author has treated 108 such cases of fractures of the shaft of the humerus with excellent results. Good union and function, 85; poor position, good function, 6; poor function, 3; non-union, 1; delayed union, 4; result not ascertainable, 9.

Conclusions: The hanging cast is reasonable since the humerus when unsupported hangs vertically; the fragments will align themselves with slight traction. The hanging cast reduces lateral motion, and when such does take place both fragments move through the same arc. This method is far less cumbersome and uncomfortable and fatiguing than abduction methods.

"Spondylolisthesis." Harold H. Hitchcock, Jr. Bone & Joint Surg. Jan. 1940, Vol. XXII, No. 1.

"The term 'spondylolisthesis' is now almost universally limited in its use to describe a forward displacement of the vertebral column consequent to a defect or solution of continuity in the interarticular portion of the neural arch of a vertebra."

The author has done considerable research relative to the developmental aspect of spondylolisthesis and presents x-rays of very young children showing a gradual increase in the spondylolisthesis over a period of time. He describes the gradual destruction of thinning of the related intervertebral disc and degeneration of this disc in the gradual production of a spondylolisthesis. This is to be regarded as important both in the development of the condition and in the development of an osseous barrier to hinder further progression of the slipping.

After rather complete embryological study of the development of the vertebral column and possible development of the spondylolisthesis the author feels that a possible cause of spondylolisthesis is that of trauma during delivery or shortly afterward which may bring about this defect. The trauma applied would be that of forced flexion of the lower lumbar spine. At this time it is possible to assume that there is a fracture of the lamina with consequent failure of complete healing with weakness of the neural arch which later in life due to trauma or strain on the vertebral column may result in gradual development of spondylolisthesis.

The abstractors should like to announce that a small volume has been prepared by the Department of Orthopedic Surgery of the University of Oklahoma School of Medicine which contains most of the publications of the members of that Department for the years 1938-39. Twenty articles appear in this book which has been distributed to all the libraries of the medical schools throughout the United States.

These abstracts have been prepared by Dr. Howard B. Shorbe of the McBride Clinic.

UROLOGY

Edited by D. W. Branham, M. D.
502 Medical Arts Building, Oklahoma City

"The Fallacy of the Treatment of Renal Calculi By Drugs." H. C. Bumpus, Jr., Pasadena, California. Transactions of the Western Branch Urological Associations, 1939.

The idea that other than surgical means might be available for the removal of stones in the kidney, has always been the fond hope of the afflicted.

Dr. Bumpus in discussing the problem reviews the various theories thought to be etiologically responsible for their formation. Basically he believes the formation of stones in the upper urinary tract is a deficiency disease. What the exact mechanism for this deposition of urinary salts is yet an unsolved problem.

He states that the most plausible method of decreasing the size of a stone in the urinary tract would be to increase the acidity in the urine with which the stone is bathed. Most urinary stones are salts of weak acids, with the exception of uric acid stones. Increasing the acidity of the urine would lead to an increase in the solubility of these salts. However, he believes that while theoretically this is possible, practically it cannot be accomplished for various reasons.

First; the presence of calcium oxalate, this common constituent of many stones is not greatly affected by the acidities encountered in urine. Second; the acidity of human urine cannot be increased beyond a pH of 4.4 without causing uric acid crystals to form. Third; to have a kidney capable of excreting a urine of such acidity, it must be close to normal functioning ability, and most kidneys that have stones are not normal functioning organs. Fourth; the presence of urea splitting organism such as the Bacillus proteus, offers an almost unsurmountable obstacle to acidification.

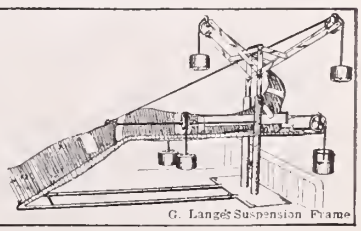
Further he reasons, the body temperature 98.6 is not particularly stimulating to such a process as dissolving a hard calculus in weak acid. Last, he invites any one who feels that urinary acidification is a practical method of dissolving a stone, to attempt the procedure by placing a stone in a test tube filled with the



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most acid urine which can be produced, sealing the top and wait for solution to occur. The stability of the calculi so treated will convince the most enthusiastic believer in the impossibility of dissolving stones while in the body.

Comment: Despite the many reports in the literature of the efficiency of acidification in preventing recurrence and growth of renal calculi, I have never been convinced as to its value. The majority of patients are unable to restrict their diet for any length of time in order to keep the urine properly acidified. In addition, the reasons advanced by Dr. Bumpus certainly place this method of treatment for urinary calculi into a place of impractical and doubtful value.

"Granular Urethritis in Women." Harry M. Spence. Dallas, Texas. Transactions of the South Central Section of the American Urological Association, 1939.

The author used as a basis for discussion of this most prevalent ailment, 118 cases of granular urethritis in the adult female, and fifty cases found in female children.

Signs and symptoms referable to bladder function, namely; frequency, urgency and dysuria are the most dominant clinical findings. In ten per cent of cases was gross hematuria present.

The foroblique system of cystoscope has been found superior to the Brown-Burger instrument for the exact diagnosis of the condition. Urethral dilation and urethral fulguration with the high frequency apparatus proved to be the most successful method of treatment. They stress that if fulguration is performed, it be extremely light in character and confined only to the mucosa. A general anesthetic should be administered for the procedure.

Of particular interest in those cases found in children is the unusual number who complained of bed wetting. Fulguration of this lesion, where posterior urethritis was the sole etiologic agent, proved satisfactory in correcting this habit.

INTERNAL MEDICINE

Edited by Hugh Jeter, M. D., F. A. C. P., A. S. C. P.
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Bright's Disease. A Review of Recent Literature. William S. McCann, M.D., Rochester, N. Y. (Archives of Internal Medicine, March 1940, Volume 65, Number 3).

This is another review of the work reported in connection with Bright's disease. It appears that those interested in the pathological physiology of the kidney have concentrated their efforts on the study of the question of the renal factor in hypertension.

Several authors have engaged themselves in the study of renin, its extraction and purification. Highly purified preparations of renin have been made by some and believed to be a protein. Some conflicting conclusions have been reached, but many factors, such as methods of preparations, have yet to be standardized. The effect of renin on the intrinsic circulation of the kidney itself has been studied by Merrill, Williams and Harrison. They believe that renin causes a constriction of the efferent arterioles of the glomerulus, and that probably tyramine constricts the afferent arterioles.

Other interesting studies include the effect of age on the sensitivity to renin by Grossman and Williams, and the influence of various ductless glands on renin by Fasciolo, Houssay and Taquini. Blalock and Levy and others have done interesting work in connection with the ligation of ureters and the consequent physiological effect of hydronephrosis. Yuile and Knutti report experiments on the use of acacia which should further discourage those who "would rashly use this substance in the management of the edema of nephrosis." Their observations appear important since they indicate that the influence of acacia may actually interfere with the regeneration of plasma protein.

Further Studies of the Intracutaneous Method of Typhoid Vaccination. By Louis Tuft, M.D., Temple University School of Medicine, Philadelphia, Pa. (The American Journal of the Medical Sciences, January 1940, Vol. 199, No. 1).

In this the author reports in essence the following: Further studies of intracutaneous typhoid vaccination confirmed the author's original observations as to the efficacy of this method, both from an immunologic standpoint as well as in the marked reduction of complete elimination of annoying reactions. In addition, evidence of satisfactory increase of the protective power of the blood and of stimulation of the somatic or O agglutinins was provided.

On the basis of these results, it is believed that the intracutaneous injection of 0.1 cc., 0.15 cc. and 0.2 cc. of the ordinary typhoid vaccine is the most satisfactory of any of the methods for typhoid immunization and should be more widely used. A single dose of 0.1 cc. seems adequate for immunization of previously vaccinated persons.

Heart Pain Relieved With Oxygen

Breathing a high concentration of oxygen will ease the pain associated with a blocked heart artery (coronary thrombosis) and with angina pectoris (chest pang), Edward W. Boland, M.D., Los Angeles, states in *The Journal of the American Medical Association.*

He says that this action of oxygen is not generally recognized, although it is well known that the functions of the heart and respiratory systems are supported by it. Oxygen, he continues, will often relieve pain not alleviated by large doses of pain-killing drugs.

Relief of heart pain in five cases reported by him by breathing high concentrations of oxygen, Dr. Boland believes, lends support to the ischemic theory (deficiency of blood in a part because of contracting blood vessels) of its mechanism. "According to the ischemic theory," he explains, "impaired circulation within the muscles of the heart results in deficient oxygen in the heart muscles and the accumulation of metabolites (products of metabolism). These substances, particularly lactic acid, chemically irritate the perceptors (sensation-receiving parts) of the sympathic afferent (central) nerves with the reflex production of pain.

"The prompt relief of pain in each case of coronary thrombosis reported was dramatic. Relief was obtained within ten minutes after oxygen treatment was instituted. Invariably the apprension, restlessness and labored breathing and the symptoms of mild shock were quickly controlled. The administration of 100 per cent oxygen is advocated when the pain is intense or is resistant to opiates."

Vitamins Furnished in Breast Milk

"Breast milk can furnish to the baby only such vitamins as are taken in the mother's food," *The Journal of the American Medical Association* points out in answer to an inquiry as to whether or not such milk contains sufficient vitamins for the infant, and if so for how long a time.

"It is therefore obvious that, unless the mother has a diet rich in vitamines C and D, she will not furnish an adequate supply of these vitamins to the baby. It is for this reason that it is strongly advisable to begin both orange juice and some form of vitamin D early in infancy. As it takes some time for either a vitamin C deficiency—that is, scurvy—or a vitamin D deficiency—that is, rickets—to develop it is impossible to say for how long a time the mother's milk alone would be adequate to protect a newborn baby. The only safe procedure is to take no chance and to supply these vitamins from earliest infancy on."



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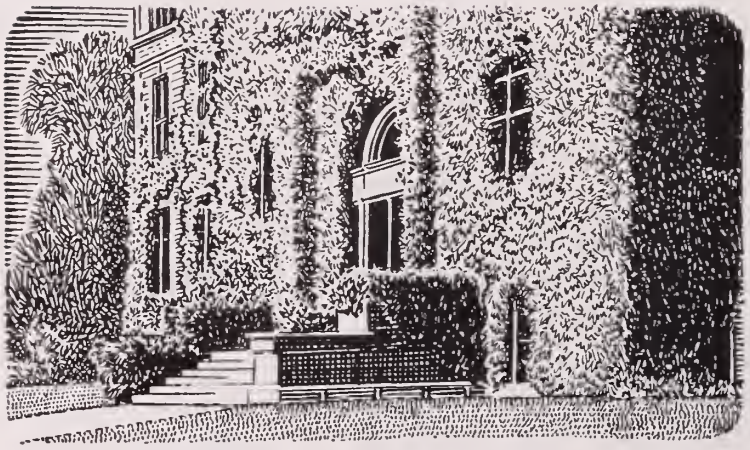
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Minor Complications of Pregnancy and Their Treatment*

BRUNEL D. FARIS, M.D.
OKLAHOMA CITY, OKLAHOMA

Many of the so-called minor complaints of women during pregnancy are overlooked or simply neglected as unimportant by the average practitioner.

For the past five years in the out patient department of University Hospital and Goodwill Center, we have been studying these minor complaints associated with pregnancy and have been taught to respect them as perhaps the first signs of impending serious complications. We have therefore endeavoured to list the minor complaints in order of their frequency as well as to present their treatment. It must be understood that these patients are clinical cases and are not able in many instances to receive the treatment they should have, i.e., rest in bed is many times an impossible order for a woman who has a family of small children and must of necessity care for them. A diet rich in vitamins would possibly be out of the question either due to lack of finances or ignorance.

BACKACHE

Backache has been in our experience the most common complaint of these patients. This complication is usually a complaint in the second trimester and is far more common in multiparous women. Dieckman believes that in many instances this backache is a symphyseal pain and is an early stage of an osteo-malacia. He recommends calcium be given with cod liver oil. We give Viosterol 10 minums daily until 5 cc are given and calcium lactate grains 5 T.I.D. for three to four weeks. We have found this complaint many times associated with pregnancies that are too close together. In a primipara backache is usually due to improper posture and to incorrect selection of shoes with a resulting strain on the sacro-lumbar junction. Backache of this type may be greatly relieved by the wearing of one type of shoe at all times. In other words, a woman must not wear slippers around the house and then, on going out, wear high-heeled shoes. If this advice does not relieve the condition we have found that relief of tension of the supporting ligaments may render these women free of pain. Our methods of securing this relief for these patients is to instruct them to sleep with the foot of the bed elevated approximately eight inches for from two to three weeks. We also instruct them to wear abdominal support which may be made of any close weave material, pinned securely around the abdomen from below upward and while they are in a prone position.

There is another type of backache common in the earlier months of pregnancy which is due to the rapid growth of the fundus and the stretching of its supporting ligaments. This type of backache usually disappears after four or five months of pregnancy. For these cases we often strap the back with adhesive for relief. The adhesive should be about four inches wide, crossing the lumbar sacral region and extending from one crest of the ilium to the other. The patient should be standing erect, heels together and the feet everted as much as possible. In the last trimester backache may occasionally be very severe and in our opinion may be due to the stretching of the round ligaments more than to the pelvic joint relaxation. Sleeping with the foot of the bed elevated greatly relieves these

*Read before the Section on Obstetrics and Pediatrics, Annual Meeting Oklahoma State Medical Association, May 7, 1940.

LIBRARY OF THE

women and this procedure should be followed until term. These patients are advised to wear the above described abdominal support, but they should be removed at night. These women should be advised not to lift or carry the younger children about the house.

HEADACHE

Headache associated with pregnancy is usually in the frontal region and is seen more commonly in the latter months. On many occasions we have advised these patients to have their eyes tested for visual disturbances and found their eyes to be normal. At one time about two years ago we had what we called an epidemic of headaches in pregnant women. After trying many treatments with no success, cultures were made of the throat and a predominance of streptococcus hemolyicus was found. On treatment of the throat, headaches disappeared.

It is possible that diet may have something to do with the cause, and that a well balanced diet could be given to private patients but hardly to a clinical case. Antuitrin S (Parke, Davis) has been suggested as treatment for these cases, but we have not used this preparation as yet in the clinic. My limited experience with the use of this preparation has been fairly successful. I usually give one-half cc three times a week until condition is relieved. For direct relief we have found nothing better than Empirin Compound tablets, (Burrough & Welcome). We have traced many of these headaches to exposure to the sunrays and are therefore careful to suggest some sort of protection for the head. Headache in the last trimester of sudden onset may be the first symptom of an impending eclampsia, and especially if associated with blindness or other visional disturbances it should always be suspected. I have never seen a case of eclampsia that did not give a history of headache, severe in type a few hours, days, or weeks before the onset of convulsions, and to my notion headache should be classed as one of the most common symptoms of impending eclampsia.

CONSTIPATION

We have not had much success with the use of drugs for the treatment of constipation in pregnancy. These cases should be treated as to type, whether spastic or simply atonic. We believe that the spastic type is more commonly seen in pregnant women because of their nervous tension. Bulky foods should therefore not be given and the condition is sometimes greatly relieved by sedatives. Mineral oil besides being very distasteful to many may cause spotting and occasional indigestion. Our best treatment so far has been the use of epsom salts, one-fourth to one-half teaspoonful in a glass of warm water before breakfast. Lately we have been using metamucil, one teaspoon in a glass of cold water three times daily before meals, but have not had sufficient time to determine results. Danforth states that women should drink plenty of water, preferably from six to eight glasses daily. Titus and others suggest the use of cooked fruits, such as baked apple, applesauce, stewed prunes, stewed pears, etc., for breakfast. In some parts of the country they are using colonic irrigations with good results. For my own practice I have found Fleets Phospho Soda not only corrects constipation but often aids digestion. I give from two to three teaspoonfuls three times daily. We would welcome any suggestions for a satisfactory treatment for this condition.

PAINS IN THE TUBO-OVARIAN REGION

This pain is more common in the second or third trimester and also may be due to increased tension on the round ligaments or possibly venous congestion of the ovarian plexus. We have found this complaint on several occasions directly associated to intercourse during pregnancy. However the pain may follow the sudden lifting of a small child or moving a heavy object. We have found the best treatment to be heat, (hot water bottle) to the tubo ovarian region, elevation of the foot of the bed for a few days and an abdominal support while the patient is in the erect position. We must not overlook cervicitis as a possible cause of these pains and the cervix should be carefully inspected.

NAUSEA AND VOMITING

I will not speak at any length on this condition as there has already been much written on this subject. I do wish to add however that nausea and vomiting in the last trimester may be significant of a serious complication, and should be studied carefully as to the cause. Suprenal gland, Cortalex tablets (Upjohn) have been used recently with marked success. From one to two tablets three times daily is usually sufficient. I have not had a great deal of success with the use of other glandular products for this condition.

EDEMA OF THE LOWER EXTREMITIES

In the clinic this condition is very commonly seen during the last few weeks of pregnancy, and has not been a serious complication unless associated with the other symptoms of toxemia. Nixon, University of Hong Kong, states that pregnant women with edema mild, moderate or marked are preeclamptic even though the other signs and symptoms are not present. More than

90 per cent of pregnant women we see in the clinic have some swelling of the lower extremities during the last weeks of pregnancy and particularly is this true of primiparas. DeLee calls our attention to the fact that a patient's weight is the best test for decrease or increase of edema and also that we may have dry eclamptics and this type is the worst to handle. We have found that this swelling of the lower extremities will disappear in a few days if the patient is given from one-fourth to one-half teaspoonful of epsom salts in a glass of warm water before breakfast. The dose may be increased to one to two teaspoonsful in water three or four times a day if necessary. We advise these women to rest in the afternoon from two to four P.M. and believe this could be undertaken by a woman with a number of small children as an afternoon nap is also good for them.

Edema associated with one or more of the other symptoms of toxemia should be treated carefully particularly if there is a rapid weight increase and an objective continuation of the edema to the upper extremities and the face.

Varicose Veins of the Lower Extremities and Vagina

This complaint is far more common in the multiparous women and becomes more pronounced and often more painful with each succeeding pregnancy. We do not believe in the injection treatment during pregnancy as we have found the condition always improves after delivery. The varicosities if present, however, may become progressively more tender and painful until the latter months of pregnancy. We have found that advising the patient to sleep with the foot of the bed elevated until term will be of great help to them. We also advise the use of the previously described abdominal support and elastic bandages to the varicosed extremities if necessary.

Toothache

It has been our experience that filling and extraction may be performed up until the onset of labor without great danger to the patient. There is still some debate as to the usefulness of calcium for pyorrhea and decay of the teeth. Toverids and Mellanby consider a poor diet of the mother during pregnancy a predisposing factor in the development of rickets and dental caries in children. Tomato juice is a good source of Vitamin "C" and can be given instead of orange juice.

Gastro Intestinal Disturbances; Heartburn

Gastro intestinal disturbances and heartburn so often seen during pregnancy is probably due to the upper displacement of the pylorus of the stomach which in turn seems to interfere with the emptying so that hydrochloric acid collects in unusual amounts. These minor gastro intestinal disturbances may be one of the first signs of an impending toxemia. (Titus) Titus suggests a careful diet for these cases and with principally the reduction of salt, coffee, jams, jellies and condiments. In the clinic, heartburn has been relieved satisfactorily by the use of magnesium, magnesium carbonate blocks, a block of which may be carried in the purse and a bite taken occasionally. Many women prefer magnesium carbonate to the milk of magnesia tablets.

Insomnia

This complaint is more common in the last trimester and may be due to the discomfort caused by the growing fetus. A glass of warm milk at bedtime with ¾ grain luminal has given us the best results in the out patient department. I believe it most important that no large amount of food should be taken after three P. M.

Nocturia

This condition is usually due to pressure of the enlarging uterus on the urinary bladder and is more commonly complained of in the first and last trimester. This also is greatly relieved if the foot of the bed is elevated.

Puritus Vulva

This complaint is not common but when it is seen it is most difficult to treat. It is most common in obese women. We have tried everything on the market, I believe, and our best treatment to date is soap and water and the application of Amertan ointment (Lilly) locally, and hot sitz baths. We have had many cases in the clinic where a specific cause could not be found. Some claim that x-ray will help these cases, but I have not had enough experience with x-ray to answer this. We know that in many women this condition disappears two to three weeks after delivery. At present we have not found any satisfactory treatment of puritus vulva.

Oculo-Glandular Tularemia*

J. FRANKLIN GORRELL, M.D.
TULSA, OKLAHOMA

Gentlemen, I have nothing new to offer you regarding tularemia, and the only reason I am presenting this paper at this time is the prevalence of a number of epidemics reported in our state, and I felt a short review to freshen our memories on this condition would not be amiss. I have seen two cases of tularemia in Tulsa and will give you a report on them later in this paper. I wish to apologize and tell you now that they are not as complete as they should be since both cases were charity and one was not able to go to the hospital. The other case was about two weeks old when first seen by me.

Oculo Tularemia of the eye — otherwise known as Paranauds conjunctivitis, was first described by Paranaud in 1889 and later was studied by Challion of France, Gifford, Berhoeff, Derby and Martin. This eye disease is an infection produced by the bacterium tularense, a micro-organism which is transmitted to man either by the bite of the infected insects, such as the wood-tick, or by direct contact with rabbits, wood rats, ground hogs or other rodents susceptible to the disease. In 1907 Dr. Martin of Phoenix, Arizona, reported an inflammatory condition of the conjunctiva accompanied by glandular involvement. It was noted that the disease occurred in those who hunted rabbits for food and it was thought to be in some way connected with the skinning of the rabbits. In 1911 a disease broke out in Utah, where it was known as deer-fly fever. In the same year McCoy and Chapin isolated the germ responsible for the disease. Mayne and Francis in 1919-1920 proved by laboratory tests that the causative factor in deer-fly fever was the bacterium tularense. In Idaho the disease known as tick-fever has also been proven to be tularemia. The name of this disease was derived from Tulare County, California, where following the investigations of McCoy and Chapin the bacillus was found among ground squirrels in that locality.

From the standpoint of ophthalmology we are more concerned with the oculo-glandular than with the general type of the disease. In cases of tularemia with ocular involvement there is marked edema of the conjunctiva which may also involve the lid border. There is also a pronounced photo-phobia, increased lacrimation and increased tenderness of the lids; muco-purilent discharge from the eye. The conjunctival lesions show large reddish, semi-transparent polypoid vegetations which are more marked on the upper lid. The glandular enlargement usually takes place simultaneously with the conjunctivitis. Sometimes this glandular enlargement precedes the conjunctivitis and involves the pre-auricular glands and at times the retro-maxillary, the sub-maxillary and cervical glands. It is claimed that about one-half of the cases the glands abscess.

The incubation period ranges between one and ten days, but usually about three or four days after exposure. The patient usually presents himself complaining of headache, chill, backache, fever and often nausea. The eyelids feel thick and may stick together due to the sero-mucoid discharge, this discharge later developing to free pus. About the same time, the lymph nodes, pre-auricular, sub-maxillary and lymph glands of the neck begin to swell and are painful on the same side. Examination of the lids at this time will show one or more small yellow discreet ulcers situated in the deep conjunctiva of the involved eye. Vail's description deserves repetition: "The contrast between the deep color of the conjunctiva and the brilliant golden color of the ulcers is as striking as a turkey-red dress with yellow polka dots." Usually the cornea is not involved but there is a marked photo-phobia, severe pain and marked lacrimation. There is no evidence that this disease is contagious but that it is transmitted by coming in contact with the infected animals. However, Weilbacher and Moss reported a case of man to man transmission by means of an accidental incision of the finger while doing an autopsy on a patient who had died of tularemia.

Diagnosis is usually easy where we have the clinical symptoms, history where a pati-

*Read before the Section on Eye, Ear, Nose and Throat, Annual Session, Oklahoma State Medical Association, May 7, 1940, in Tulsa.

ent has had definite contact with rabbits, ticks, etc. One must always suspect this condition when dealing with farmers, hunters, cooks and market handlers, especially so where you have such rapid glandular involvement and the following diagnostic aids should be at once employed:

(1) Intra-dermal skin tests of killed bacterium tularense. The skin tests are positive as early as the third day, whereas agglutinations are never positive before the second week. Any inflammatory response at the site of the injection is considered positive.
(2) Cultures.
(3) Guinea pig inoculations, subcutaneously. The animal usually dies in three to six days showing involvement of the liver and spleen.
(4) Agglutination test.

Hot or cold applications, whichever gives most relief, antiseptics, silver salts and sulfanilamide. In 1932 Foshay introduced an anti-serum treatment and it should be used. This serum is given intravenously as soon as possible after your diagnosis has been completed. Reports show that this serum is more useful if given early in the disease. I did not use the serum in the two cases I treated because as I stated before they were charity cases but I would certainly use it if the patient could afford it.

Case number 1: Patient R. L., male, age, twenty years. Well developed young man; family history negative. He gave a history of dressing rabbits about four days before trouble started, and was first seen in my office on September 18, 1932. He had been treated by two other physicians. One diagnosed the condition as conjunctivitis, the other as gonorrheal conjunctivitis. Examination showed lids markedly swollen, marked lesions of the upperlids, papular form. Considerable free discharge from the eyes; marked photo-phobia and severe headache. The temperature was 102 degrees, pulse 96 and left side of face was swollen, the pre-auricular gland and also sub-maxillary. I sent the patient to Morningside Hospital where they found urine examination negative and white blood count 13,750. Four days later Dr. Cronk opened the sub-maxillary gland and three or four days later opened the pre-auricular gland. The eye condition improved as the glands of the face and neck improved. The patient was in the hospital about ten days. The last examination was on November 5, 1932. Swelling was all gone and incisions healed, but there was still some granulation on upper lid.

Case number 2: B. J. W. male, eight years of age, well developed boy with family history negative. He gave a history of having helped dress rabbits one week before eye trouble and was first seen in my office on December 6, 1932. He had been treated by a general physician for about two weeks for the eye condition which the mother thought was pink-eye. She took him to her family physician and according to the history, the lids were swollen and free discharge from the left eye. The physician treated this eye but with no improvement and when he told the mother he did not know what was causing the trouble or did not think anyone else could tell her, she brought the child to my office. Examination showed at this time a marked swelling of the lids, macular and papular lesions on upper lid; some edema of the Bulbar conjunctiva, free discharge from eye and marked photo-phobia. Temperature 100 degrees, pulse 84. There was marked swelling in the pre-auricular gland on the affected side. No sub-maxillary swelling. Treatment used—antiseptic solution to eye, heat to eye and potassium iodides internally. Patient examined last on January 11, 1933, swelling gone, conjunctiva practically cleared up and glandular involvement subsided.

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Management of a Few Urological Conditions*

M. H. Newman, M.D.
Shattuck, Oklahoma

The following will be only a recapitulation of many recent articles which I have read since writing this paper, but being of prime importance to all of us, cannot be an overly discussed subject.

I am including in this discussion management of both specific infections, particularly gonorrheal infections and non-specific infec-

*Read before the Section on Urology and Syphilology, Annual Session, Oklahoma State Medical Association, May 8, 1940, in Tulsa.

tions of the urogenital tract, with exception of tuberculosis.

In the treatment and medical management of pyogenic infections of the upper urinary tract, that is, urinary infections above the bladder, we divide into two groups of lesions. One group which is associated with lower urinary tract obstruction, another, which is unassociated with lower urinary tract obstruction, however, may be associated with an obstruction of the upper urinary tract, although being macroscopically undiagnosable even by our more recent and superior methods of study of the urinary tract.

As to the types or forms of upper urinary tract infections, we have two, namely bacillary and coccal, it being very important that we know with which type we are dealing. Practically speaking, bacillary forms of infection are found in the presence of obstruction some place along the urinary tract, but frequently the bacillary form of infection may be superimposed upon an already existing coccal form of infection. Infections are either ascending or hematogenous in origin. Coccal infections are usually hematogenous in origin. Hematogenous infection or primary coccal infections, are frequently derived from some surface lesion, or another focus of infection such as the prostate, hemorrhoids, colon or more distant foci, the sinuses, teeth or tonsils.

The acute fulminating type of hematogenous infection usually calls for a nephrectomy. But in the other less acute types in which surgery may only be considered, the infection usually will be eradicated under proper medical management and our good friend time.

Depending on the individual susceptibility of each kidney, this type of infection will ultimately be localized as an abscess or multiple small abscess, with later development of a suppurating pyelonephritis. If the sequence of events be followed, we find a tendency toward absorption of some of this material with the coalescence of numerous small abscesses, with the ultimate formation of cortical abscesses, usually adjacent to the capsule and in conjunction with multiple infectious thrombosis, resulting in necrosis, and again the coalescence of these to form a definite renal carbuncle, which is a very definite entity both clinically and pathologically. The other complications being subcortical infections and perirenal infections which are the beginning of perirenal abscesses. The symptomatology of this type of infection depends entirely upon the susceptibility of the kidney toward the infection, associated with the individual immunity, and not always ending in the syndrome of an acute infection, but frequently only symptoms of a debilitating disease which remains too frequently undetermined until the terminal state has been reached.

In the acute ascending type of infection of the upper urinary tract, which as stated previously, is usually a bacillary infection, which presupposes an infection in the bladder or lower genital tract with or without obstruction. The symptoms of the acute onset; one will find chills, fever, headache, gastro-intestinal upset, with nausea and vomiting, and if the infection be of bacillary origin alone, one may find the sickest individual you ever witnessed and one who is not in danger. This type of infection is usually classified as acute pyelonephritis, following which, one of three things will happen: the inflammation will gradually subside, regardless of the type of bacteria, bacillary or coccal; you will get some surgical complication simulating those of hematogenous origin; or the most common thing which is chronic pyelonephritis.

The source of the infections of the bladder are likewise of the same types of bacteria. Too frequently the infections of the bladder are complications from overdistention of the bladder following operative procedures, which if properly cared for at the time of the operative procedure would prevent many unfortunate individuals from the discomfort of the bladder infection necessitating weeks and sometimes months to correct. No post operative patient should be allowed to go more than eight hours without emptying bladder, and if so, the patient will frequently get a bladder infection.

The ultimate object of the treatment of bladder and upper urinary tract infections, is the sterilization of the urine.

The principles of treatment of bladder and upper urinary tract infections rely mainly on the relief of any obstruction of the urinary tract, as it should be remembered that urinary tract infections can rarely be controlled satisfactorily in the presence of obstruction at any point. Thus, obstructions, whether it be of the ureter, or at the outlet of the renal pelvis, or the bladder neck, interdicts entirely the chance of sterilizing the urine. Thus, obstruction, or the possibility, of obstruction must be known and dealt with to reach the ultimate object, that of sterilization of the urine.

It is not our purpose in this paper to outline or discuss the entire range for relief of obstruction of the urinary tract, and from this point we assume the obstruction, if present, has been or will be dealt with, and thus we review certain principles of treatment.

Until recent years, our only and most specific procedures in eradicating any type of infection of the urinary tract depended on the use of urinary antiseptics, the maxi-

mum benefit obtained from the use of same depending on the acidification of urine to a ph of 5.5 or less, whether it be with the formaldehyde containing drug or mandelic acid (hexamethylene group).

Generally speaking, antiseptics and acidification are much less satisfactory for infections due to coccal forms, either staphylococci or streptococci, and perhaps more frequently than we realized, in spite of a pure culture, we are combating a mixed type of infection, which occasionally results in complicated coccal infections following any type of urinary tract surgery. The coccal type of infection frequently responds to small doses of neoarsphenamine. One form of bacteria in particular was very difficult to eradicate, namely, proteus bacillus, due to inability to obtain an acid urine in the presence of the B proteus, as the outstanding properity of the proteus is to split urea, and thus produce highly alkaline urine, resulting in the failure of the action of the antiseptics. As you have noticed, have purposely used past tense.

Thus, along with the present day trend toward the streamlining of all types of machinery, trains, furniture, ships, and in fact all material things, science is leaving nothing undone, therefore the urologist from a medical standpoint, has been streamlined and has been able to discard the so-called "Pill-bag," containing its various urinary antiseptics and acidifiers, and is now placed out in society, a carefree fellow, well groomed and well mannered, facing the world with a smile, knowing full well he has concealed in one pocket, one hundred sulfanilamide, in another pocket a like number of sulfapyridine, and "on the hip" a box of bicarbonate soda, and he is amply prepared to combat the increasingly recognized urinary infections.

We will not discuss the modis opperandi of the sulfanilamide group. To date, we have found sulfanilamide to be our mainstay in treatment of urinary tract infections, being effective against all bacteria found in the urinary tract except streptococcus fecalis, and having the advantage of being effectively bactericidal in urine of any ph and coincidentally useful in acute renal damage where the only urine excreted is alkaline. For eradication of streptococcus fecalis infection, mandelic acid with the proper maintenance of ph of urine to a level below 5.5 is most effective. This is obtained by the limitation of the fluid intake to two pints per twenty-four hours, plus ammonium mandilate (20 to 40 gr., or 1.5 to 3 gram, 3 to 4 times a day) plus ketogenic acid ash diet.

The dosage of sulfanilamide is still not standardized. The majority of clinicians recommend large doses for the first twenty-four hours, and then a daily maintenance dose which is much smaller. Those who have access to laboratory, may accurately determine the sulfanilamide urine concentration, as it has been found where sulfanilamide urine concentration reaches 100 to 200 mg., percent, the drug is bactericidal.

Sulfanilamide, being a toxic drug, although almost a panacea for urinary tract infection, must be given continuously, with close supervision of patient while drug is being used. Those who are more blood-minded than some of us require a leukocyte count at least every other day for observation of any diminution of same, and this is possible when patient is institutionalized, but the patient being ambulatory and less frequent visits to one's office, a checkup may safely be done at less frequent intervals. Observation leads one to the conclusion that those who are confined either in the hospital or home, respond much better to treatment with sulfanilamide than those who are ambulatory.

The toxic effect of sulfanilamide may be reviewed as observed, are nausea, restlessness, insomnia, cyanosis, headache, loss of appetite and skin reactions, varying from a mild erthema to a diffuse urticarial like rash.

Coincidentally, we might state here a tendency to familial susceptibility toward toxic or allergic reactions which have been observed recently in four instances.

In these observations, their relationships were either that of brother and sister, father and daughter, or brother and brother. The toxic reaction in all cases appeared characteristically familial, for example; one brother had severe headaches associated with a prolific urticarial reaction, and the other brother also had same type of reaction, necessitating discontinuing the use of the drug, although neither knew the other's experience with the drug; in another instance, father and daughter had severe headaches, nausea and vomiting irrational state and when patient was seen was in a semi-comatose condition, and with only small doses of the drug, the reaction being similar to that found in any other drug sensitively. Sulfanilamide could be discussed by each of us indefinitely, but the above is only a few outstanding features of the drug.

The use of sulfapyridine in infections of the bladder and upper urinary tract, have not been found to be superior to the sulfanilamide and is far more expensive.

Treatment of lower urinary tract infection will be confined to a short discussion in the treatment of gonorrheal infection, particularly those which fail to respond to the other methods of treatment. That is, the use of sulfapyridine in gonorrheal infections. Will state again we have no cure-all, but

in many cases in which the urinary antiseptics, sulfanilamide, irrigations, or a combination of all have failed, this drug will frequently give surprising results.

The cases treated, includes only the cases with but mild complications, the extent of the disease varying from anterior urethritis to a posterior urethritis, with a few having a mild prostatitis. The duration of the disease in the cases varies, from 6 hours (initial symptom) to 4 months, all types of treatment, some being ambulatory, others being confined to the bed for a period of time. Only three females being treated in the group. All cases had urethral discharges.

During the short time it will be impossible to give detail of each individual case. However, I am giving summary of the method of treatment used and am convinced that this drug has a definite place in the treatment of gonorrhea.

The routine followed was this: The patient received one tablet (7½ gr.) every three hours for six doses each day, followed with an equal amount of sodium bicarbonate, or a total of 45 grains (3gms) each day of the sulfapyridine. In conjunction with this, the patient used urethral irrigation of mild silver solution (usually 5% neo silvol) night and morning. In a few cases it was necessary to massage the periurethral glands or Littre's glands gently over a urethral sound.

In approximately five to 7 days following the beginning of the use of the drug, the urethral discharge has ceased, and consequently the smear for the invading organism was negative. Frequently the discharge will cease after twenty-four hours. The drug is continued five to eight days following the disappearance of discharge.

Within the last week, had two cases which were strongly suspected and observed by patients only one or three hours previous to beginning of treatment, at which time a positive smear was found on both. The marital state of the individuals was such that slightly more drastic methods were used in treatment. These individuals were placed on a liquid diet, consisting of tomato juice, friut juices, plus 15 gr., of sulfapyridine every three hours followed by a large quantity of water containing citrocarbonate. Within sixteen hours there was no evidence of the infection and observation each day has revealed no reccurrence. If positive smear had not been obtained, I would be hard to convince that they had ever had the disease. I can account for the rapid eradication, as a result of large quantities of fluids with sufficient sulfapyridine urinary concentration the bug not having time to imbed itself in the mucosa.

From the above, one might be led to believe the drug is only used in those cases which have failed to respond to other forms of treatment, which is not the case, as this drug may be used as frequently as the sulfanilamide in the early case. Being used in the smaller doses than when being used in the treatment of pneumonia probably accounts for the fewer toxic symptoms, usually mild. Of course in addition to the use of the drug, the usual restrictions given are advised, that is, refraining from use of alcohol, avoiding sexual excitement, etc. It is almost an established fact, both in the use of sulfanilamide and sulfapyridine, if no response in ten days to two weeks, ample consecutive treatment, some other method of treatment should be resumed and if this fails, again return to the use of one of the sulfanilamide group medications.

In conclusion, sulfanilamide in proper dosage has been found to eradicate all types of bacterial infections of the urinary tract with the exception of streptococcus fecalis, which respond to mandelic acid treatment. The ultimate object of treatment of the bladder and upper urinary tract and infection, is relief of all obstructions of the urinary tract and sterilization of the urine, the principles depending on the above.

Recommendations in Routine Anesthesia Procedure*

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The presentation of certain recommendations in anesthetic procedures would have been a very simple and brief affair only fifteen or twenty years ago. The number of anesthetic agents available and the meager knowledge concerning them would have limited such a discussion to a few basic facts relating to their administration. Today our armementarium includes such a variety of basal and general anesthetic agents that the subject has become a very large one. The truth of the matter is that the field of anes-

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thesia has almost passed out of the hands of the general medical man and into the control of physicians who spend no little time in preparing themselves for this highly specialized branch of medical practice.

There was a time in the memory of most of you when the field was so narrow that the trained technician or nurse could satisfactorily render the few agents which were considered safe anesthetics. Then, too, a few physicians in various localities by reason of their special interest in anesthesia did very creditable work. Those of us who have been scientifically trained in this special field often wonder why there have not been more physicians interested in this highly important specialty in the past two decades. It was this apathy which brought about the introduction of the technician to the exclusion of the physician. The reverse is now in order and it behooves the medical profession as a whole to encourage the movement and equip themselves to surpass in efficiency the non-medical anesthetist. So many of the agents we use these days involve a technique which the nurse cannot legally or otherwise employ.

Good anesthesia involves so much more than actual rendition of the anesthetic. The physician chosen to give an anesthetic, whether he be a trained anesthetist or not, becomes a part of the medical and surgical team as soon as the operation becomes a certainty. He is consulted concerning the condition of the patient, the ability of the surgeon to work under various conditions and anesthetic agents, the tolerance of the patient for specific agents and also his own adeptness in the administration of some chosen technique. He is apprised of certain pertinent facts about the patient in relation to his operative procedure. He learns whether the patient is a good, moderate or bad surgical risk. The anesthetist always informs himself relative to any major physical or mental handicap which his patient may have. Idiosyncrasies and abnormal laboratory findings are other important things he wants to know because they materially influence him in his selection of an anesthetic agent for a specific case.

As a trained anesthetist I feel that the only part of an anesthetic procedure which should be routine is the actual technique involved in the administration of agents or combinations of anesthetic agents. Surely there is no such thing as a routine anesthetic suitable for all patients for any surgical operation. Every anesthetist and every surgeon has a preference for a certain kind of anesthetic for a specific surgical procedure. This preference, however, should not be made universally routine but rather should fit the patient under consideration. There are so many indications and so many contra-indications that no cut and dried anesthetic regime can be followed any more than a prearranged surgical technique can always be adhered to.

The first recommendation of a specific nature which appears to me important enough to speak of is the matter of discussing the type of anesthetic with the patient. After many years of experience I must tell you that I think this is a sad mistake and a matter of poor judgment on the part of the anesthetist. This is one place where the old physician who knew the art of the practice of medicine had an advantage over the modern younger physician in that he never talked too much. An anesthetist who voluntarily brings up a discussion of the kind of anesthetic to be used with the patient is surely talking out of school and many times is merely heaping trouble upon his shoulders. About the only impression the average patient receives from a scientific discussion of the anesthetic in advance is that you are trying to force some particular anesthetic upon him. If you leave the matter up to the patient or his wife you create the impression that you are asking them to make a decision of which they are incapable. I see no reason whatsoever to ever approach this subject unless the patient brings it up himself. If you are firm when you tell him what you propose to use or merely tell him you will use the anesthetic best suited for his case he will not discuss the matter any further but leave it to you. If he has any preference he will never forget nor neglect to relay that to you. Should his selection be contrary to your choice or what you know to be best for him you should insist upon having your way because you are assuming the responsibility and you know best what agent or technique is superior in his case. You will usually find the prejudice he may have for any certain anesthetic is based on heresay and not personal knowledge. He can usually be divorced from this misapprehension.

Another important point in the selection of an anesthetic is not to be too dogmatic and force some procedure upon a patient against his wish. If by firm argument or persuasion you cannot make him agreeable, then it is better to alter your ideas enough to prevent antagonizing him. Fear is a real complication preceding induction of an anesthetic and hence it is advised not to disregard it. Should any unforeseen complication or sequelae develop which could be blamed upon the anesthetic the anesthetist will surely be the recipient of such blame if he isn't diplomatic enough to settle his difference of opinion amicably before the operation. Assurance that you know your business and that he is interfering with his own

welfare are points in the way of persuasion. Coaxing to the point of breaking down an inherent fear is bad phychology and often will end in your own disappointment.

We now have many sedatives in the form of barbituric acid preparations which deserve no small amount of praise and recommendation in preoperative preparation. Amytol, nembutal, seconal, barital, veronal and luminol are the important drugs in this group. These agents in the usual therapeutic dosage do not depress the heart and respiration to any appreciable degree. They produce a natural sleep and thereby allay anxiety and apprehension. They are antagonists to novocaine and related drugs and thereby produce a limited amount of analeptic action upon large doses of local or spinal anesthetics. These barbiturates have a synergistic action with morphine and thereby further enhance the preoperative sedation. It is highly recommended to insure a decent night's sleep before surgery. Three grains of any one of these compounds usually will give the desired effect and give the patient proper background for his immediate preoperative preparation.

I feel some mention should be made of the time-honored habit of many physicians, usually surgeons, in ordering morphine grains one-fourth and atropine grains one one-hundred and fiftieth to the average adult one hour before operative time. Many times this is done thoughtlessly, principally because from the time they were interns in some charity hospital they had been brought up on that kind of a preoperative diet. There isn't any more common sense in ordering that combination routinely than in giving ether routinely to all patients. The combination of morphine and scopolamine or hyoscine is far superior in producing adequate sedation. If you think you must have atropine for its stimulation of the vagus and so forth you can give it in the same hypodermic without interfering. The morning of operation it is thought best to give one or two capsules of a barbiturate about two hours or more in advance of operating time. Then your hypodermatic should be given not less than one hour before surgery. Morphine has its maximum sedative effect in about one and one-half hours after administration. The very old and the very young do not receive hyoscine or scopolamine. This premedication is given for a definite purpose — namely, to lower the metabolic rate, depress the cerebrum and its apprehension and to assist in general in the relaxation of the patient mentally and physically. I contend that your preoperative medication should be ordered after you have seen and studied your patient and after you have decided upon the kind of anesthetic you probably will give. If you desire to produce an effect, why not give your sedatives with that in mind and eliminate many of your troubles before the patient is brought to the operating room. Most of the patients prepared in this way can carry on a conversation but have no fear and little or no memory of being taken to surgery. I believe this a distinct advantage and you owe it to your patient. He will appreciate it.

Intravenous preparations of the barbiturates such as evipal or pentothol sodium have a very definite place in modern anesthesia. They are not difficult to administer and will give excellent results if you understand and are prepared for the few difficulties which may arise during administration. An open and free airway must be maintained at all times. Vomiting may occur and this should be anticipated. Some cyanosis or true anoxemia should be treated with oxygen therapy. This intravenous anesthesia is very convenient in those apprehensive patients who just all but demand that they be asleep before leaving their room. It is also a nice introduction to a general inhalation anesthetic. It is excellent for work about the face where it is advantageous to keep out of the way of the operator or where a cautery is anticipated. It is used by some for the introduction of endotracheal tubes as airways but that lies with those who are not afraid of laryngospasm and some embarrassment before it can be relieved.

I feel that intravenous anesthesia can be safely used for most any procedure of short or moderate length but is particularly indicated in emergency cases who may have a a full stomach, for work about the head and for painful manipulations or dressings. It is very convenient for removal of fracture cases from their room to the surgical ampitheatre. Administered in two and one-half percent solution it is less liable to cause complications during administration. However, given in five or ten per cent strength, it is very satisfactory.

Avertin is a valuable basal agent which should be used only by those who are professional anesthetists and who understand its shortcomings and danger points. In doses of eighty milligrams per kilogram of body weight when supplemented by some inhalation agent it affords considerable help in the matter of relaxation. Avertin is another agent that is always pleasing to the patient because it produces unconsciousness in the room and varying amounts of sleep postoperatively. Because it is an alcohol and is detoxified by the liver it is never recommended in border line cases with possible liver insufficiency. It is not adaptable to the aged or poor risk patient because of slow and faulty elimination. It does reduce the

amount of inhalation agent used and has some virtue in that respect. Caution should be sounded by the professional anesthetist and to the surgeon lest the poor risk patient persuade him to use avertin.

Ether properly given, either as the sole agent or supplemental to some gaseous agent is highly recommended for the occasional anesthetist or one who is not familiar with the more highly specialized procedures. It has a wide margin of safety and has served well for almost a hundred years now. Many of the bad effects of ether may be attributed to faulty technique in its administration and to lack of supportive procedures which we now use before, during and after all anesthetics. Hygiene, drug therapy, fluids, tracheal catherization and the like reduce the postoperative sequelae to a minimum. I feel that ether is the best anesthetic for children. For those who use modern gas machines for inhalation work I can highly recommend the use of divinyl ether as an adjunct to the gases when deep relaxation is necessary. Divinyl ether is a comparatively new product and is not to be confused with ordinary di-ethyl ether which we ordinarily refer to as anesthetic ether. It is potent in a closed circuit and has a quick recovery period without much of any nausea or vomiting. It is not without danger for the less experienced.

Cyclopropane is the anesthetic of choice where general narcosis is desired. It is meant only for the experienced as it is potent in mild amounts and has some complicating factors which require experience. It is highly explosive in certain proportions. It may produce cardiac irregularities and therefore is contraindicated in conductive heart disease. It is used in high concentrations of oxygen and therefore has a very wide field of use where such things as nitrous oxide and ethylene would not do.

Nitrous oxide for short cases not requiring much relaxation is highly recommended. It does not constitute an explosive hazard. I do not recommend it in the hands of the novice nor do I feel it should be crowded so to speak, to produce profound narcosis with the idea of obtaining deep relaxation.

It would be a grave mistake, to my way of thinking, to conclude a discussion of anesthetic agents without mentioning the most dramatic and useful technique the anesthetist has in his power—spinal anesthesia. I feel that when one employs it sufficiently to use it with wisdom it constitutes the finest anesthetic for abdominal surgery we have. It is not recommended as any routine measure because, as I have said before, there is no such thing in good anesthesia or surgery. Most of the bad results quoted by apprehensive patients are pure unadulterated myths. They have no foundation or scientific proof. In communities where spinal anesthesia has been used extensively there is scarcely any idle talk concerning its bad results as interpreted by the layman. Like any other procedure I have ever known in medicine, this form of anesthesia is not without its limitations and the more an anesthetist uses it the better he knows those and the more proficient he becomes with it. Novocaine, the agent most commonly used, is only slightly toxic even in large amounts. It probably has the lowest percentage of failure to produce the desired results of any of the techniques the modern anesthetist uses.

Beside the relief of pain the principal effect we try to produce in giving an anesthetic is muscular relaxation. There is no single agent or combination of agents which produce the extreme degree of relaxation that does spinal. A contracted and quiet intestine is also very advantageous and almost as important. There is no other anesthetic which will produce this ideal condition. Relaxation and a contracted intestine produce a quiet abdomen which surely facilitates surgical procedure. It is impossible to compare the operative and post operative results produced by spinal anesthesia with any other technique. Difficult pelvic and upper abdominal operations are made comparatively easy.

Surely it is reasonable to assume that these benefits to the surgeon and the anesthetist are passed on to the patient in the matter of a more rapid convalescence, a less stormy postoperative recovery and fewer sequelae and complications. I never could understand why those who condescend to use spinal anesthesia for their poor risks do not by the same reasoning deduct that it might be good for their standard risk patients.

I feel that the acute abdominal emergency is one place where it is probably most valuable. Here the patient is scarcely ever prepared, has muscular rigidity difficult to abolish and has some condition either inflammatory or bordering on it where inhalation agents are least apt to make conditions ideal for surgery.

In those cases where more time is required than novocaine ordinarily affords, the use of pontocaine solution with glucose or mixed with novocaine is recommended. The use of a hypo-baric solution of nupercaine offers a highly satisfactory result where you expect to need even more time.

Two or more hours of surgery can very satisfactorily be done with this technique. Those who are not familiar with the procedure should acquaint yourselves with it because it will solve your problem and eliminate dangerous supplementation by some inhalation agent.

Heavy preliminary sedation is important in all spinal technique. The use of ephedrine almost routinely is important. Neosynephrine instead of ephedrine gives you a rise in blood pressure of more lasting proportions and with a slowing of the pulse instead of the usual increase. In transurethral prostatic resections and rectal work the use of one hundred milligrams of novocaine or one cubic centimeter of pontocaine solution both combined with two or three cubic centimeters of a ten per cent glucose solution will give you a controlled low anesthesia which diffuses very little to higher levels. It is superior to caudal or caudal and sacral anesthesia combined in its results and ease of administration.

This covers most of the anesthesia problems which confront the anesthetist. There has been no attempt to describe the details of various techniques employed in some of these procedures because a general group such as this is not particularly interested in that phase of the discussion.

I should like to encourage more and continued interest in good up-to-date anesthesia among the anesthetists, the surgeons and the physicians doing varying amounts of anesthesia in their respective communities. I think that in all fairness to those doing surgery and to the patients in particular, those of you who daily do some anesthesia owe it to all concerned to make use of all the agents and variations in technique at your disposal. You should periodically get some instruction and help in any of the newer drugs or procedures so that you may be a credit to the specialty. It is in this way that you advance the practice of medicine, the specialty of anesthesia and keep within the medical profession those things such as anesthesia which belong to doctors. The more interest you display and the more adept you become the greater will be the service to your patient; which after all is our chief reason for being doctors.

The Management of Minor Anal Pathology*

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From time immemorial surgical literature has recorded innumerable variations of two fundamental themes—amputation and drainage. A new hemostatic, a modified technique to facilitate removal of an organ or evacuation of pathogenic material—each serves today, as it has in the past, as a basis for a new contribution to medical literature.

Because surgical procedures present a somewhat rhythmical reiteration of previous stages of opinion and because examination of the written records of the past indicate that fundamental surgical principles did not germinate spontaneously but were slowly evolved as the centuries came and went, the fallacy of any attempt to present a completely novel idea becomes apparent to each of us who prepares to address any scientific body.

This seems to be especially true in the field of proctology. Rectal examinations were made by the Egyptians several hundred years B. C. The bivalve speculum was in use in Pompeii. Hippocrates, born in the Island of Cos 460 years before Christ, left descriptions of fistula and hemorrhoids and instructions concerning their treatment which would not be entirely out of place in a text book of today. Aurelius Cornelius Celus wrote his "De Medicina" during the reign of Tiberius 400 years later, and in his writings accurately described colitis, the dysenteries, the use of the scalpel in fistula and included a warning concerning the difficulty and danger of opening a fistula with a high internal opening which still remains pertinent. No startling discovery will be reported here —but an attempt will be made to evaluate the various methods of treatment available in the various stages of several of the common diseases of the anal canal.

The anal canal is the terminal portion of the lower bowel which forms an angle with the rectum, is uniformly constricted by the sphincter muscles and the levator ani muscles and is the site of all the commonly observed ano-rectal diseases. It is divided in its mid-portion by the dentate (pectinate) line from which project tiny sensitive skin-covered papillae, lying under which at intervals are a group of small open crypts. The proximal or rectal portion of the canal is lined by delicate columnar-celled mucosa, circumscribed by the internal spincter and

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levator muscles, innervated chiefly by sympathetic nerves and drained by lymph chains leading to the rectorecal and intra-abdominal glands. The distal portion of the canal, usually termed the anal orifice or anus, is originally an ectodermal structure; is lined with squamous epithelium, encircled by the external sphincter muscle, innervated chiefly by cerebro-spinal sensory nerves and drained by lymphatics leading to the groin.

The four common anal entities—hemorrhoids, ulcer, fistula and pruritus—are progressive lesions; each will be observed to pass through three stages to reach pathologic maturity.

The type of treatment indicated for each of these diseases of the anal canal should properly vary with its stage of development and it is my feeling that much of the difference of opinion among orthodox proctologists on the subject of conservative as opposed to radical surgery can be clarified and reconciled by a careful analysis of the various stages of development which occur in each of the lesions under observation.

Anal Ulcer is a non-specific loss of continuity of anal integument with accompanying infection and hypertrophy of adjacent tissues. Such an anal ulcer is the final stage of a syndrome, which originates as an abrasion and in an intermediate phase was a fissure-in-ano.

Pruritus Ani is a neuro-epithelial dermitis located in the anus and perianal skin, produced by the continued presence of an irritating moisture to which the individual has become locally allergic. Pruritus can be demonstrated grossly and microscopically to pass through three different stages, each of which requires different management.

Anal Fistula is the final stage of a progressive syndrome, having its origin in an infection of one of the anal crypts which later burrows to the perianal or sub-mucous spaces to form a localized purulent deposit (abscess) eventuating in fistula.

Hemorrhoids (or piles) are varicose tumors lying in the anal canal with a tendency to prolapse from the anal orifice and to bleed. They are subdivided into external and internal varieties and neither of these is stationary but tends to pass constantly from one phase of tissue involvement to another.

The management of the first three conditions will be outlined specifically.

Non-Specific Anal Ulcer

Perianal Abrasions: As a result of tight or rough clothing, horseback riding, excessive perspiration or poor local hygiene, the perianal skin, particularly over the anterior raphe extending from the margin of the anus to the perianal body, often becomes chafed and sensitive. Abrasions are common findings in the leathery wet skin of puritus ani and traces of blood may appear on the toilet paper as a result. Individuals with normal anal outlets but with a tendency to pass very large dry stools are often subject to cracking of the marginal skin, usually at several areas simultaneously.

It is important that minor lesions of this nature shall not be confused with true fissure-in-ano. Relief is usually prompt if the patient is instructed to keep the perianal skin clean and dry, zinc stearate powder rubbed on several times daily being helpful to maintain proper absence of moisture. The lesions may be painted with a mild antiseptic or with compound tincture of benzoin if they give pain or cause itching. Ointments are inadvisable because of their tendency to further macerate the epithelium. The water intake may be increased if the stools are hard and dry.

First Stage—Abrasions of the Anus: As a result of a congenitally small anal orifice, from the traumatism of a very large stool or a stool containing a foreign body, or as a complication of internal prolapsed hemorrhoids, a narrow clean separation of tissue may be observed in either the posterior or anterior commissures or both. This abrasion produces slight stinging pain and occasionally a drop of blood on the toilet paper. The treatment indicated is the application of a surface anesthetic, preferably 10% metycaine and instruction to the patient to take a daily intestinal lubricant. It is important that silver nitrate not be applied to the abrasion as this often results in transforming it into a chronic fissure.

Second Stage—Fissure-in-Ano: This is a single chronic linear separation of tissue with slight infection, situated in either the posterior or anterior commissure of the anal orifice. It is usually a sequella of the abrasion described. The anatomical arrangement of the encircling exterior sphincter muscles at the two commissures is the best explanation of the predeliction of the fissure for this point. The deeper fibres of the sphincter from their origin in the coccyx divide into fleshy lateral bundles which decussate at the anterior commissure to insert in the perineal body. The circular superficial fibers (or orbicular sphincter) lie just underneath the integument. The posterior commissure, it will be seen, has poor protection and tearing is most likely to occur here, least apt to occur on either side of the anus where the sphincters are smooth and snug. The presenting symptoms of *fissure in ano* are pain, sharp in character, following the stool, a small amount of blood on the toilet paper, constipation, increased nervousness and frequently referred discomfort in the back and lower limbs. The lesion described may frequently

be cured by the injection treatment first suggested by A. B. Graham and, where definite stenosis is not marked, this therapy is indicated. It is given as follows: the perianal skin is cleansed and an antiseptic is applied—from 5 to 10 drops of 5% quinine urea hydrochloride are then injected through the marginal skin 1/16 of an inch behind the fissure, the medicament being distributed from a point well above the lesion to just beneath the epidermis. A small glass syringe with a short 25 gauge needle is used and the injection must be done quickly as it is quite painful for a brief period. One-half per cent Diothane or one of the other long-duration anesthetics now available may be substituted for the quinine urea. This treatment is followed by gentle dilitations over a period of several weeks.

Third Stage—Non-Specific Ulcer: This is a single chronic ulcer situated just inside the anal verge, usually in the posterior commissure but occasionally in the anterior commissure. Double ulcers occur so infrequently as to suggest that the lesion is specific when multiplicity is observed.

The ulcer is the end stage of fissure-in-ano. The lesion has become oval with undermined edges and a superficial purulent film is seen. In this stage the adjacent tissues hypertrophy, and because of this a triad of lesions will be found in advanced cases: the sentinel pile on the anal verge, an enlarged fibrotic papilla at the nearest point on the dentate line, with the ulcer between. The story, copied from one text book to another for unnumbered years, that the sentinel pile is the remains of a crypt and papilla torn from its usual location can, of course, be easily disproved by finding these structures in their proper place on the dentate line.

The symptoms of anal ulcer are pain, not only following the stool but prolonged over a period of hours, an occasional show of blood on the toilet paper, contraction of the anal outlet and frequently slight purulent drainage. If the onset of pain is delayed until 30 minutes after defecation, it is probable that the ulcer will be found to be near the dentate line.

The differential diagnosis must include anal chancroid and chancre, anal tuberculosis, perianal abrasions and subcutaneous fistula. Chancroid is a multiple, spreading lesion, much more painful than fissure. It is usually seen in both commissures simultaneously because of the tendency to autoinoculation. Vaginal lesions may be present. Chancre is a single slightly painful lesion usually outside the anal orifice.

Anal tuberculosis is a larger deeper lesion and is usually painless.

Perianal abrasions are multiple and associated with evidence of skin irritation; cracking of the marginal skin is multiple, found in an anus of normal caliber with a history of passage of large stools and yields ready to simple measures.

TREATMENT OF ULCER

When the ulcer is well defined and calloused; when a large sentinel pile or papilla is present; when combined with hemorrhoids or when anal abscess impends, the pathology present is best completely removed surgically with wide drainage. Separation of the two posterior columns of the external sphincter muscle to permanently relax the orifice is usually wise. Crude divulsion of the anal muscles under general anesthesia has fortunately lost much of a popularity based largely on ease of performance rather than upon surgical logic.

PRURITUS ANI

Pruritus Ani is a chronic neuro-epithelial disease; a dermititis and neuritis of the perianal and anal skin and sensory nerves, produced by the continued presence of an irritating moisture to which the individual has become locally allergic and characterized by continued itching, thickening and superficial breaking of the epithelium and by an interrelated emotional reaction on the part of the patient.

Symptoms: Itching is the predominant symptom. It is present after bowel movements and following exercise but always more marked at night. Local burning and stinging are transitory when present. Mental stress emphasizes the itching.

Etiology: All manner of explanations have been given for this very puzzling syndrome and no doubt various individual cases are explained by different agencies. Pelvic reflexes, food, alcohol or tobacco allergy, potential diabetes, improper local hygiene, yeast infection and various specific bacteria are among etiologic factors which have been advanced as causative agents.

My own opinion is that pruritus ani is the direct result of the continued seepage of some moisture on the perianal tissues to which the individual has finally become sensitive. This moisture may be the mucorrhea produced by an old case of prolapsing hemorrhoids; it may be from a draining sinus or chronic ulcer; it may be due to a lack of local ventilation in a stout individual. As a rule, however, a definite lack of tone will be observed in the sphincter muscles in individuals with marked pruritus and it is my opinion that in the great majority of cases this over-relaxation, whether it be congenital or due to previous surgical divulsion or severance of the sphincter permits constant escape of intestinal secretions and is, therefore, the most commmon cause of the neurodermititis.

Pathology and Stages of Development: Numerous observers, including Montague, Montgomery and Tucker and Hellwig, have reported that the pathologic changes in the skin will vary with the progressive development of the condition. In the *simple transitory* type, marked changes in the superficial skin are not present, but microscopic section will show an exudative inflammation with dilation of the lymphatics and blood vessels, perivascular infiltration of leucocytes and lymphocytes with acanthosis of the prickle-cell layer of the skin.

In *chronic pruritus*—the second stage—the skin is thick, grayish and resembles tissue which has been moist over a long period. Abrasions are present. Microscopically, epithelial hyperplasia with marked acanthosis of skin layers, especially the malphigian layer, and an increase in the amount of connective tissue is observed; the lymph vessels are dilated and lymphocytic infiltration is present.

In the final stage—*chronic pernicious pruritus ani*—the skin shows extensive lichenification with excoriations and local ulcers and fibrosis. Microscopically, there is atrophy of the epidermis, hair follicles and sebacious glands. A dense infiltrate of leucocytes, lymphocytes and serum is observed in the upper part of the cutis. Deep fissures and shallow ulcers are present from which there is a superficial invasion of bacteria.

Treatment According to Stage: Simple Transitory Pruritus: In this stage of the disease, the external skin changes are usually limited to a slightly angry appearance, with slight swelling and occasionally vesicle formation. Frequently no change can be observed. The most helpful measures for the correction of this condition are those designed to maintain a clean, dry, smooth perianal skin. The patient is instructed to avoid strong alkali soaps, to cleanse and dry the area carefully after bowel movement and in warm weather to apply a waterproof toilet powder several times daily.

Chronic Pruritus: Here the patient presents himself with a history of intermittent itching over a period of months or years, with a thick, gray, often moist skin. It is, of course, essential that any manifestation of dietetic irregularity or constitutional disease be investigated and corrected. If definite anal pathology—hemorrhoids, condylomata, ulcer, cryptitis or proctitis—is present, it would be unlikely that the pruritus could be alleviated before such lesions are eliminated. If abrasions are present, the entire area is painted daily with tincture of mercurochrome, followed with compound tincture of benzoin which is allowed to dry thoroughly, forming a protective surface. This is continued until all abrasions and lichenifications are cleared up. The patient is then advised to avoid any soap locally, to cleanse and dry the perianal skin after each bowel movement and at bed time with water and to use a lotion containing 35% alcohol and a mercurial antiseptic. The skin is again dried and zinc stearate powder rubbed in thoroughly.

Chronic Pernicious Pruritus: Where the measures outlined above are ineffective and in the pernicious stage of the disease, where marked infection and ulceration of the skin is present, more radical measures are indicated. Many chemicals have been advocated for subcutaneous injection for the relief of this condition, but alcohol has given so much better results in my hands that I much prefer it to any of the other agents and to skin-undercutting. The treatment is too painful, however, to be administered effectively in the office. The patient should be in a hospital and a block anesthesia given. Absolute alcohol may then be injected in small amounts over a wide area by the method of Harvey Stone or 40% alcohol may be injected in much larger amounts, following the directions of Buie. The latter technique unquestionably results in a larger percentage of permanent cures, but is, of course, much more disabling. While neither of these procedures is perfect from the standpoint of a cure in all cases, the injection of alcohol under the perianal skin is our most effective weapon in the management of pernicious pruritus.

Anal Fistula

(Cryptitus, Abscess, Fistula)

Anal fistula is the final stage of a pathological syndrome having its origin in an infection in one of the anal crypts which later burrows to the perianal, perirectal or submucous spaces to form a localized purulent deposit eventuating in fistula. This concept which has been emphasized chiefly by Dr. L. A. Buie of Rochester, Minnesota, is gaining general approval, although Mr. Earnest Miles and others feel that hematogenous and lymphatic infections in the perianal tissues are an occasional source.

CRYPTITIS is an infection of one or more of the small sinuses located on the dentate line about one-third of an inch above the anal orifice. The crypts are recesses lying behind the invaginating ectodermal lining of the lower anal canal and are usually found behind the tit-like projecting papillae.

The commonest *cause* of infection in a single crypt is retention of small bits of feces or small ingested foreign bodies in these sinuses, which open upward. Ordinarily the foreign body is discharged before examination, but I have removed two chicken bones, a grape seed and a bran flake from infected crypts which eventuated in fistulae.

A fish bone, a fish scale and a lock of hair are additional examples of foreign bodies found impacted in crypts. Trauma from very firm stools with slight tearing of the crypt edges and admission of infection to its tissues is also an etiologic agent.

Multiple cryptitis is more rare and is usually due to some infection (often gonorrhea in females) in the anal canal or lower rectum with implantation in these anal sinuses.

The *symptoms* are a dull aching pain in the anal canal combined with sphincter spasm and a sensation of local pressure.

When acute, the area can be found by the finger; when chronic, an anoscope must be introduced and the dentate line investigated with a crypt-hook.

The *treatment* consists of removing any foreign material, flushing the crypt with a mild antiseptic solution using a flexible irrigator bent to form a "shepherd's crook" and in the chronic stage, applying a weak silver nitrate solution to the interior to encourage obliteration of the cavity. Endoscopic visualization is necessary for these procedures.

If the crypt is deep, formation of an abscess may be avoided by passing a crypt hook into the sinus and under infiltration anesthesia excising the covering epithelial surface. The wound should be cleaned and painted with a mild antiseptic daily until it heals, the patient being instructed to flush the anal canal with an ounce of witch hazel after every bowel movement using a small all-rubber syringe.

ABSCESS. Due to extension from infected crypts in the anal canal and from anal or rectal ulcers, inflammatory areas may develop in the tissues adjacent to the anorectum. The organisms present are those found in the normal stool, the colon bacillus predominating. In perhaps 5% of cases the tubercle bacillus is found, always secondary to phthisis (Chisholm). The gonococcus is a possible agent in women.

The direction of spread of the original anal infection determines the type of abscess formed, a wide variety of locations occurring. The common types, however, are:

Submucous fistula is a frequent sequella of ing is discovered just beneath the mucosa of the upper anal canal and lower rectum, the patient's symptoms being a sensation of fullness and weight inside the bowel with mild throbbing pain.

It is quite important that submucosal abscess be differentiated from abscess lying completely outside the rectal wall as the treatment is diametrically different. Fluctuation, linear dimensions, and at times, the appearance of pus in the affected crypt on gentle pressure over the mass are differentiating points. On gentle pressure rupture may occur through the crypt from which the infection originated. Otherwise the mass should be well drained through an incision from the crypt upward, preferably made with the cautery. Because of the internal location and the possibility of hemorrhage, the patient should be in the hospital, and the drainage should be done under general or block anesthesia.

Submucous fistula is a frequent sequella of incompletely incised submucous abscesses.

Marginal: The mass is detected under the skin-lined portion of the anal canal burrowing from the dentate line outward to appear at the anal verge. Because of its location in the grasp of the external sphincter muscle, the patient's *symptoms* are constant severe localized pain and throbbing aggravated by stool, exercise or coughing. Diagnosis is made by palpating the small mass between the index finger inserted in the canal and the opposed thumb at the anal margin.

The *treatment* is early incision under diothane infiltration anesthesia. The finger is inserted in the anal canal and pressure made to render the abscess more prominent, an incision being made parallel to the anal margin. An additional incision may be made at right angles from the center of the first, outward (Pruitt). Packing is unnecessary except for hemorrhage. A hot sitz bath may be given after each bowel movement.

Ischiorectal: Abscesses in the fatty tissue of the ischiorectal fossa which lies lateral to the terminal rectum and anal canal comprise the great majority of cases seen. *Post-anal* and *ano-perineal* abscesses lying posterior and anterior to the anal canal respectively give similar symptoms except for location and the management is the same.

The *symptoms* are dull aching or severe throbbing in the region with elevation of temperature and discomfort on sitting. Because the abscess is not the result of hair follicle infection but a burrowing process from the anal canal at the level of the dentate line, the primary pus collection is an inch from the surface and definite localization on the part of the patient is difficult in early stages. For the same reason fluctuation is a late symptom and incision should never be delayed to this point, as fluctuating rectal abscesses have practically always entered the fistula stage through back pressure on the burrowing tract to the point of origin in the anal canal.

The *diagnosis* should be made in early stages before brawny induration, redness, swelling and superficial fluctuation makes it apparent to a lay observer. With one finger inside the anal canal opposed to the thumb on the surface a tense, tender, small mass can be detected adjacent to the anal canal in one or the other of the fossae. It is at

this stage that ischio-rectal abscesses should be evacuated if fistula is to be prevented.

The *treatment* is drainage. If the abscess is advanced to the stage of fluctuation, if both buttocks are involved, or if purulent drainage is seen escaping into the anal canal, it is often just as well to make only a small incision at the point of fluctuation, trimming the edges to eliminate the necessity for packing. This can be done under infiltration anesthesia or by freezing a small point with ethyl chloride, and this minor drainage is justified only as preparation for the radical operation for fiistula in ano to be performed in seven to ten days after the acute inflammatory process has subsided. The patient is instructed to take frequent hot sitz baths and to apply hot dressings. The cavity may be gently flushed with mild antiseptic or warm normal saline solution through a small irrigating tip daily.

If the abscess is detected at an earlier stage, a much more radical management is justified in the hope of forestalling completion of the fistulous process. Under general or block anesthesia the abscess is drained freely, a large area of normal fat and skin superficial to the cavity being removed to promote easy drainage, early granulation and to eliminate packing after the first twenty-four hours ("scalping" operation of Fansler). This should be done preferably in the hospital.

Abscesses in Pelvi-rectal Space: Collections of pus in the lateral spaces lying above the levator muscles and below the peritoneum or in the loose tissue or glands between the rectum and the sacrum are infrequent but offer considerable diagnostic difficulty when encountered.

The *symptoms* are often entirely constitutional or pelvic in early stages with temperature, leucocyte increase, vague pelvic discomfort and even low peritoneal rigidity. Referred pain to the sacral plexus is common.

The *diagnosis* is made by high digital examination, a boggy mass being detected outside the rectum either laterally or posterior which must be differentiated from prostatic abscess, submucous rectal abscess, retention of urine and low pelvic abscess.

Early incision under general or block anesthesia in a hospital is essential to prevent rupture into the rectum with sinus formation or even death. These abscesses are drained by an approach through the ischio-rectal space or between the coccyx and anus, the rectum should not be entered.

Anal Fistula: A fistula is a tract connecting two body surfaces resulting from injury, destructive inflammation, a neoplastic process or congenital defect.

While the great majority of sinuses which present openings in the perianal region are anal fistulae or tracts connecting the perianal skin or vagina with the anal canal, several other varieties of fistulae are found in this region. Openings in the midline of the male perineum may lead to the urethra, those in the posterior midline may be congenital or inflammatory outlets of pilonidal or coccygeal sinuses. Lateral openings an inch or more from the anal margin may be the secondary openings of rectal fistulae caused by stricture, benign or malignant.

The usual anal fistula presents one internal or primary opening in a crypt or more rarely in an anal ulcer and one or more discharging external or secondary openings on the skin.

Some two-thirds of this group show external outlets in the posterior ischio-rectal areas, posterior raphe or in the anterior ischio-rectal area more than an inch and a half from the anal orifice. Goodsall of St. Marks Hospital first called attention to the fact that these posterior type fistulae present curved tracts and have a common origin in a large crypt in the posterior commissure, while anterior openings near the anal orifice lead directly to the dentate line.

Fistula may be complete with both primary and secondary openings present or incomplete where one or the other cannot be found. The exact type of fistula present is determined by the anatomical site of the abscess of which the fistulous tract is the contracted cavity.

The usual *symptoms* are the presence of discharging sinus with recurrent attacks of pain, swelling and redness when drainage is temporarily impeded. *Diagnosis* may be made by palpating the tract, by inserting a flexible probe, by injecting a dye, in complicated tracts by sterioscopic X-rays following injection of lipiodol.

The *treatment* is always surgical, fistulectomy calls for as much skill, ingenuity and judgment as is available and should be performed with the patient in a hospital under spinal, caudal or gas anesthesia.

I feel that the "regular" physician should be free to use any therapy which in his judgment will be helpful. His selection of methods should, however, be based on the degree of disease present in the individual patient.

For that reason in this discussion I have attempted to set out simple criteria by which such a decision may be reached in the management of some common ano-rectal diseases.

EDITORIALS

OUR PREPAREDNESS

The action of the House of Delegates of the A. M. A. in placing at the disposal of the Government the services of organized medicine in our preparation for defense gives us a very definite responsibility in Oklahoma.

We must know the status, both military and domestic, of every physician in the state. A year ago your Editor advised that a questionnaire be sent every physician, but by some one in authority it was vetoed. Had it been done we would now have this information and the physicians of the State classified as to availability and the service they can best perform.

There is no need to appeal to the patriotism of Oklahoma physicians, we are always ready to accept our responsibility, however the Surgeon General of the army will want some information and when the method of obtaining it is determined we must be prompt in furnishing it.

Social objectives have been before the people of this nation for the past seven years, now we must face an unsocial objective in the preparation for war or defense. The threat has been to our methods of practice, now the threat is to our whole nation in the form of tanks, swarming planes and every massed sort of military invasion.

Now we must not allow ourselves to be imposed upon at this time by becoming pawns in the hands of the administration during this emergency. There will still exist the effort to place medicine under federal control from which we must protect ourselves.

Keep your eye on the ball. Be thoroughly patriotic but not gullible.

MEMBERSHIP

It is most important for the Oklahoma State Medical Association to expand its membership by soliciting those eligible, who are not members, to join.

There are about 2,400 licensed physicians in the State. Of these, at least 2,000 are eligible for membership and among the principal reasons that they are not members is because they have not been solicited. It might appear that every physician should be sufficiently interested to seek membership, but this is unfortunately not the case and some one must accept the responsibility of carrying out a program of personal contact with these non-members and bring in their application.

A membership committee in the larger County Societies might be the solution of the problem while in the smaller societies the President and Secretary should be willing to undertake this task. In either instance, what it takes to get the job done is personal interest and determination to bring our membership up to a maximum.

Another activity that would increase membership is the organization of all unorganized counties and this is the job of our councilors, however, their efforts can be stimulated by the demands of our physicians in unorganized and neighboring counties.

Our new constitution provides that where two or more counties unite to form a Society that each component County shall be entitled to a delegate for each twenty-five members or fraction thereof. This will give the most fair representation in the House of Delegates to all physicians in the State.

Now let us go forward with this campaign to increase our membership and be prepared to show a united front in meeting the important questions that are now before not only the profession but the entire electorate of Oklahoma.

College of Surgeons Publishes Manual of Training in Surgery

Pursuant to its aim of raising the standards of surgery, the American College of Surgeons has published a 24-page "Manual of Graduate Training in Surgery" in which are incorporated the requirements for its approval of programs of training in general surgery and the surgical specialties in hospitals of the United States and Canada.

The "Manual" is the outcome of ten years of study of educational programs in surgery by the Board of Regents and several committees of the College. In 1937 a Committee on Graduate Training in Surgery was established under whose direction the field staff of the College personally surveyed a selected group of hospitals in connection with the work of the Hospital Standardization Department. Based on the findings of those surveys, "Fundamental Principles and Criteria" were developed which have been applied in evaluation of plans for graduate training in surgery. The plans of 179 hospitals have so far been approved by the College.

CORRECTION

The Journal erred in its May issue, when it identified a scientific article by Dr. V. H. Musick, "A Resume of the Advance Made in the Treatment of Human Pellagra," as having been read at the 1940 session of the Oklahoma State Medical Association. The article published in the May issue was one submitted several months ago, while a later paper on the subject was read at the last annual meeting.

• THE PRESIDENT'S PAGE •



Increasing responsibilities are being placed upon the officers and committees of our Association during 1940-41. The incessant propaganda against organized medicine and certain local issues strike at the very foundation of our profession and impress upon me the seriousness and gravity of the position with which you have honored me. I shall serve you to the best of my ability.

As physicians, we are not political-minded. We are interested in the science and art of medicine and in the health of the people of Oklahoma. However, when our professional life or death is involved, we believe we have a right to outline the therapy, and we intend to do so. The administration of the prescription, however, requires reinforcement of the firm foundation upon which our organization is established and which is now being attacked. To strengthen this foundation, we must have the *active* cooperation of every member and the enlistment of every physician eligible to become a member of our State Association.

Some may ask, "What benefits are to be derived from active membership in the Oklahoma State Medical Association?" A few of those benefits are:

(1) Eligibility to membership in national medical associations and special societies.

(2) Participation in the Medical Defense Fund in case of malpractice suits.

(3) A monthly scientific journal which is comparable to many of the leading medical publications.

(4) Executive headquarters where he or his county society may always come for information or aid.

(5) The counsel of numerous committees which are constantly at the services of members.

(6) Acceptance into post-graduate courses sponsored by the Association and which are rated among the best in the world.

(7) Assurance to the public, business firms, and insurance companies that the physician member is a reputable and qualified practitioner of medicine.

Remember, your State Medical Association can do things for you that you alone cannot accomplish. Support it—work for it—and the reward shall be yours.

Sincerely yours,

Henry N Turner

President.



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Oklahoma State Medical Association
1940

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RUHL, N. E. *Weatherford*
RYAN, W. A. *Thomas*
STOLL, A. A. *Clinton*
TISDAL, WILLIAM *Clinton*
VIEREGG, F. R. *Clinton*
WIGGINS, C. W. *Clinton*
WILLIAMS, GORDON *Weatherford*
WOOD, J. GUILD *Weatherford*

GARFIELD

BAKER, R. C. *Enid*
BOND, IRA T. *Enid*
CHAMPLIN, PAUL B. *Enid*
DUFFY, FRANCIS M. *Enid*
FEILD, JULIAN *Enid*
FRANCISCO, GLENN *Enid*
GREGG, O. R. *Enid*
HAMBLE, V. R. *Enid*
HARRIS, D. S. *Drummond*
HINSON, BRUCE R. *Enid*
HOPKINS, P. W. *Enid*
HUDSON, F. A. *Enid*
HUDSON, HARRY H. *Enid*
HYER, J. V. *Garber*
JACOBS, RAYMOND G. *Enid*
MAYBERRY, S. N. *Enid*
McCROSKIE, M. R. *Fairview*
McEVOY, S. H. *Enid*
MERCER, WENDELL J. *Enid*
METSCHER, ALFRED J. *Enid*
MILES, G. O. *Enid*

NEILSON, W. P. *Enid*
NEWELL, W. B., SR. *Enid*
NEWELL, WALDO B., JR. *Enid*
REMPEL, PAUL H. *Enid*
RHODES, W. H. *Enid*
ROBERTS, C. J. *Enid*
ROBERTS, D. D. *Enid*
ROSS, GEORGE *Enid*
ROSS, HOPE *Enid*
RUDE, EVELYN *Enid*
RYAN, ROBERT O. *Fairview*
SHAVER, S. R. *Fairview*
SHEETS, MARION E. *Enid*
SPECHT, ELSIE *Fairview*
TALLEY, EVANS E. *Enid*
VANDEVER, H. F. *Enid*
WALKER, JOHN R. *Enid*
WATSON, J. M. *Enid*
WILKINS, A. E. *Covington*
WILSON, GEORGE S. *Enid*
WOLFE, E. J. *Waukomis*

GARVIN

ALEXANDER, ROBERT M. *Paoli*
CALLAWAY, JOHN R. *Pauls Valley*
GREENING, WILLIAM P. *Pauls Valley*
GROSS, T. F. *Lindsay*
JOHNSON, GALVIN L. *Pauls Valley*
LINDSEY, RAY H. *Pauls Valley*
MONROE, HUGH H. *Lindsay*
PRATT, CHARLES M. *Lindsay*
ROBBERSON, M. E., SR. *Wynnewood*
ROBBERSON, MARVIN E., JR. *Wynnewood*
SHI, AUGUSTIN H. *Stratford*
SHIRLEY, EDWARD T. *Pauls Valley*
SULLIVAN, CLEVE L. *Elmore City*
WILSON, H. P. *Wynnewood*

GRADY

BAZE, ROY E. *Chickasha*
BAZE, WALTER J. *Chickasha*
BONNELL, W. L. *Chickasha*
BOON, U. C. *Chickasha*
BYNUM, TURNER *Chickasha*
DOWNEY, D. S. *Chickasha*
EMANUEL, LEWIS E. *Chickasha*
EMANUEL, ROY E. *Chickasha*
HENNING, A. E. *Tuttle*
LEEDS, A. B. *Chickasha*
LITTLE, AARON *Minco*
LIVERMORE, W. H. *Chickasha*
MASON, REBECCA *Chickasha*
McCLURE, H. M. *Chickasha*
MITCHELL, C. P. *Chickasha*
PYLE, OSCAR *Chickasha*
RENEGAR, J. F. *Tuttle*
WOODS, LEWIS E. *Chickasha*

GRANT

HARDY, I. V. *Medford*
LAWSON, E. E. *Medford*

GREER

BORDER, G. F. *Mangum*
BROWN, FOREST R. *Mangum*
BUTTRAM, C. A. *Mangum*
CHERRY, G. P. *Mangum*
HOLLIS, J. B. *Mangum*
LANSDEN, J. B. *Granite*
LOWE, J. T. *Mangum*
MEREDITH, J. S. *Duke*
PEARSON, LEB E. *Mangum*
POER, E. M. *Mangum*
RUDE, JOE C. *John Sealy Hospital, Galveston, Texas*

HARMON

HOLLIS, L. E. *Hollis*
HOPKINS, S. W. *Hollis*
HUSBAND, W. G. *Hollis*
JONES, J. E. *Hollis*
LYNCH, R. H. *Hollis*
RAY, W. T. *Gould*
STREET, O. J. *Gould*
YEARGAN, W. M. *Hollis*

HASKELL

CARSON, W. S. *Keota*
RUMLEY, J. C. *Stigler*
WILLIAMS, N. K. *McCurtain*

HUGHES

DAVENPORT, A. L. *Holdenville*
DAVENPORT, JOHN *Holdenville*
HAMILTON, S. H. *Non*
HICKS, C. A. *Holdenville*
HOWELL, H. A. *Holdenville*
JOHNSTON, L. A. S. *Holdenville*
KERNEK, CLYDE *Holdenville*
LONG, TROY F. *Holdenville*
MAYFIELD, IMOGENE *Holdenville*
MUNAL, JOHN *Holdenville*
PRYOR, V. W. *Holdenville*
SHAW, JAMES F. *Wetumka*
TAYLOR, W. L. *Holdenville*
WALLACE, C. S. *Holdenville*

JACKSON

ABERNETHY, E. A. *Altus*
ALLGOOD, J. M. *Altus*
BERRY, THOMAS M. *Jacksonville, Texas*
CROW, E. S. *Olustee*
ENSEY, J. E. *Altus*
FOX, R. H. *Altus*
HIX, J. B. *Altus*
HOLT, WILLARD D. *Altus*
MABRY, E. W. *Altus*
McCONNELL, L. H. *Altus*
REID, J. R. *Altus*
SPEARS, C. G. *Altus*
STARKEY, W. A. *Altus*
STULTS, J. S. *Altus*
TAYOR, R. Z. *Blair*

JEFFERSON

ANDRESKOWSKI, W. T. *Ryan*
BROWNING, W. M. *Waurika*
COLLINS, D. B. *Waurika*
DERR, J. I. *Waurika*
EDWARDS, F. M. *Ringling*
HOLLINGSWORTH, J. I. *Waurika*
MAUPIN, C. M. *Waurika*
WADE, L. L. *Ryan*

JOHNSTON

LOONEY, J. T. *Tishomingo*

KAY

ARMSTRONG, W. O. *Ponca City*
ARRENDELL, C. W. *Ponca City*
BEATTY, J. H. *Tonkawa*
BECKER, L. H. *Blackwell*
BERRY, G. L. *Blackwell*
CLIFT, MERL *Blackwell*
CURRY, JOHN R. *Blackwell*
GARDNER, C. C. *Ponca City*
GHORMLEY, J. G. *Blackwell*
GIBSON, R. B. *Ponca City*
GOWEY, H. O. *Newkirk*
HOWE, J. H. *Ponca City*
HUDSON, J. O. *Braman*
KENNEDY, VIRGIL N. *Newkirk*
KINSINGER, R. R. *Blackwell*
KREGER, G. S. *Tonkawa*
MALL, W. W. *Ponca City*
MATHEWS, DEWEY *Tonkawa*
McELROY, THOMAS *Ponca City*
MOORE, G. C. *Ponca City*
MORGAN, L. S. *Ponca City*
NEAL, L. G. *Ponca City*
NIEMANN, G. H. *Ponca City*
NORTHCUTT, C. E. *Ponca City*
NUCKOLS, A. S. *Ponca City*
RISSER, A. S. *Blackwell*
RISSER, PHILIP *Blackwell*
SANGER, W. W. *Ponca City*
VANCE, L. C. *Ponca City*
WALKER, I. D. *Tonkawa*
WHITE, M. S. *Blackwell*
WRIGHT, L. I. *Blackwell*

YANDELL, HAYS R. *Ponca City*
YEARY, G. H. *Newkirk*

KINGFISHER

DIXON, A. *Hennessey*
GOSE, C. O. *Hennessey*
HODGSON, C. M. *Kingfisher*
LATTIMORE, F. C. *Kingfisher*
MEREDITH, A. O. *Kingfisher*
STURGEON, H. VIOLET *Hennessey*
TAYLOR, JOHN R. *Kingfisher*
TOWNSEND, B. I. *Hennessey*

KIOWA

ADAMS, J. L. *Hobart*
BONHAM, J. M. *Hobart*
BRAUN, J. P. *Hobart*
FINCH, J. WM. *Hobart*
HATHAWAY, A. H. *Mountain View*
MOORE, J. H. *Hobart*
WALKER, F. E. *Lone Wolf*
WATKINS, B. H. *Hobart*

LEFLORE

BAKER, F. P. *Talihina*
BEVILL, S. D. *Poteau*
BOOTH, G. R. *LeFlore*
BRADLEY, FRANK *Talihina*
COLLINS, E. L. *Panama*
DEAN, S. C. *Howe*
DORROUGH, J. *Monroe*
FAIR, E. N. *Heavener*
HARVEY, JOHN *Heavener*
LOWREY, R. W. *Poteau*
MINOR, R. W. *Williams*
ROGERS, G. A. *Talihina*
ROLLE, NEESON *Poteau*
ROSBOROUGH, W. D. *Talihina*
SHIPPEY, W. L. *Poteau*
WOODSON, E. M. *Poteau*
WOODSON, O. M. *Poteau*
WRIGHT, R. L. *Poteau*

LINCOLN

ADAMS, J. W. *Chandler*
BAILEY, CARL H. *Stroud*
BROWN, F. C. *Sparks*
BURLESON, NED *Prague*
DAVIS, W. B. *Stroud*
ERWIN, PARA *Wellston*
HURLBUT, E. F. *Meeker*
JENKINS, H. B. *Tryon*
MARSHALL, A. M. *Chandler*
NICKELL, U. E. *Davenport*
NORWOOD, F. H. *Prague*
ROBERTSON, C. W. *Chandler*
ROLLINS, J. S. *Prague*

LOGAN

BARKER, PAULINE *Guthrie*
CORNWELL, N. H. *Coyle*
FIRST, F. R. *Crescent*
GARDNER, P. B. *Guthrie*
GRAY, DAN *Guthrie*
HAHN, L. A. *Guthrie*
HILL, C. B. *Guthrie*
LARKIN, H. W. *Guthrie*
LeHEW, J. LESLIE *Guthrie*
MILLER, W. C. *Guthrie*
PETTY, C. S. *Guthrie*
PETTY, JAMES S. *Guthrie*
RINGROSE, R. F. *Guthrie*
RITZHAUPT, L. H. *Guthrie*
SOUTER, J. E. *Guthrie*

MARSHALL

HOLLAND, JOHN LEE *Madill*
RAFF, J. S. *Madill*
YORK, JOS. F. *Madill*

MAYES

COPPEDGE, O. N. *Disney*
MORROW, B. L. *Salina*
PUCKETT, CARL *22 W. 6th, Okla. City*
WERLING, E. H. *Pryor*
WHITAKER, W. J. *Pryor*
WHITE, L. C. *Adair*

McCLAIN

BARGER, G. S. *Purcell*
COCHRANE, J. E. *Byars*
DAWSON, O. O. *Wayne*
KOLB, I. N. *Blanchard*
McCURDY, W. C. *Purcell*
McCURDY, W. C., JR. *Purcell*
ROYSTER, R. L. *Purcell*

McCURTAIN

BARKER, N. L. *Broken Bow*
CLARKSON, A. W. *Valliant*
FRAZIER, RALPH *Wright City*
McBRAYER, W. D. *Haworth*
McCASKILL, W. B. *Idabel*
MORELAND, J. T. *Idabel*
MORELAND, W. A. *Idabel*
SHERRILL, R. H. *Broken Bow*
SIZEMORE, PAUL *Broken Bow*
WILLIAMS, R. D. *Idabel*

McINTOSH

JACOBS, LUSTER I. *Hanna*
LITTLE, DANIEL E. *Eufaula*
ROY, EMILE *Checotah*
STONER, RAYMOND W. *Checotah*
TOLLESON, WILLIAM A. *Eufaula*
WOOD, JAMES L. *Eufaula*

MURRAY

ANNADOWN, P. V. *Sulphur*
FOWLER, ARTHUR *Sulphur*
*LUSTER, J. C. *Davis*
PARKER, WARREN E. *Davis*
POWELL, W. H. *Sulphur*
SADLER, F. E. *Sulphur*
SLOVER, GEORGE W. *Sulphur*

MUSKOGEE

BALLANTINE, H. T. *Muskogee*
COACHMAN, E. H. *Muskogee*
DIVINE, D. G. *Wagoner*
DORWART, F. G. *Muskogee*
DOYLE, W. H. *Muskogee*
EWING, FINIS W. *Muskogee*
FITE, E. H. *Muskogee*
FITE, W. P. *Muskogee*
FULLENWIDER, C. M. *Muskogee*
HAMM, S. G. *Haskell*
HOLCOMBE, R. N. *Muskogee*
JOBLIN, W. R. *Porter*
KLASS, O. C. *Muskogee*
KUPKA, JOHN F. *Haskell*
McALISTER, L. S. *Muskogee*
McINNIS, J. T. *Muskogee*
MOBLEY, A. L. *Albuquerque, N. M.*
MOLLICA, STEPHEN G. *Muskogee*
NEELY, SHADE D. *Muskogee*
OGLESBEE, C. L. *Muskogee*
OLDHAM, I. B. *Muskogee*
OLDHAM, I. B., JR. *Muskogee*
RAFTER, J. G. *Muskogee*
RAFTER, JOHN R. *Muskogee*
SANDERS, H. U. *Muskogee*
SCOTT, H. A. *Muskogee*
WALKER, J. H. *Muskogee*
WARTERFIELD, F. E. *Muskogee*
WEAVER, W. N. *Muskogee*
WHITE, CHARLES ED *Muskogee*
WHITE, J. HUTCHINGS *Muskogee*
WOLFE, I. C. *Muskogee*
WOODBURN, JOEL T. *Muskogee*

NOBLE

COLDIRON, D. F. *Perry*
COOKE, C. H. *Perry*
EVANS, A. M. *Perry*
FRANCIS, J. W. *Perry*
HEISS, J. E. *Perry*
RENFROW, T. F. *Billings*
WIGNER, R. H. *Marland*

OKFUSKEE

BLOSS, C. M., JR. *Okemah*

*Died May 17, 1940.

BOMBARGER, C. C. *Paden*
BRICE, M. O. *Okemah*
COCHRAN, C. M. *Okemah*
KORNBLEE, A. T. *Weleetka*
LUCAS, A. C. *Castle*
MELTON, A. S. *Okemah*
PEMBERTON, J. M. *Okemah*
PRESTON, J. R. *Weleetka*
SPICKARD, L. J. *Okemah*

OKLAHOMA

ADAMS, ROBERT H. *Ramsey Tower*
AKIN, ROBERT H. 400 *W. Tenth*
ALFORD, J. M. *Medical Arts Bldg.*
ALLEN, E. P. 1200 *N. Walker*
ALLEN, GEORGE T. 1200 *N. Walker*
ANDREWS, LEILA E. 1200 *N. Walker*
ARRINGTON, C. T. 715½ *N. Walnut*
BAILEY, F. M. *Quemado, N. M.*
BAILEY, W. H. 301 *N. W. Twelfth*
BAIRD, J. BYRON 2519½ *S. Robinson*
BAIRD, W. D., JR. 2519½ *S. Robinson*
BALYEAT, RAY M. 1200 *N. Walker*
BARB, T. J. 318 *S. W. 25th St.*
BARKER, C. E. 1200 *N. Walker*
BARRY, G. N. 800 *N. E. 13th St.*
BATCHELOR, JOHN J. *Medical Arts Bldg.*
BAUM, E. ELDON *Medical Arts Bldg.*
BELL, AUSTIN H. 301 *N. W. Twelfth*
BINKLEY, J. G. *Medical Arts Bldg.*
BOATRIGHT, LLOYD C. *Perrine Bldg.*
BOGGS, NATHAN *Perrine Bldg.*
BOLEND, REX *Medical Arts Bldg.*
BONDURANT, C. P. *Medical Arts Bldg.*
BONHAM, WILLIAM L. *Medical Arts Bldg.*
BORDER, C. L. *Amer. Natl. Bldg.*
BORECKY, GEORGE *Ramsey Tower*
BRADLEY, H. C. *Perrine Bldg.*
BRANHAM, D. W. *Medical Arts Bldg.*
BREWER, A. M. *Perrine Bldg.*
BROWN, GERSTER W. *Medical Arts Bldg.*
BRUNDAGE, CARL L. 1200 *N. Walker*
BURTON, JOHN F. 1200 *N. Walker*
BUTLER, H. W. 1200 *N. Walker*
CAMPBELL, COYNE H. 717 *N. Robinson*
CAILEY, LEO F. *Medical Arts Bldg.*
CATES, ALBERT M. 2733 *N. W. 20th St.*
CAVINESS, J. J. *Medical Arts Bldg.*
CHAFFIN, ZALE *Municipal Bldg.*
CHARNEY, L. H. *Medical Arts Bldg.*
CLARK, ANSON L. *Medical Arts Bldg.*
CLARK, LeMON *Medical Arts Bldg.*
CLARK, RALPH O. 1706 *S. E. 29th St.*
CLOUDMAN, H. H. *Medical Arts Bldg.*
CLYMER, C. E. *Medical Arts Bldg.*
COLEY, A. J. *Hightower Bldg.*
COLEY, JOE H. *Hightower Bldg.*
COLLINS, H. DALE *Medical Arts Bldg.*
COLLOPY, PAUL J. *State Health Dept.*
COLONNA, PAUL C. 800 *N. E. 13th St.*
COOPER, F. M. *Medical Arts Bldg.*
COSTON, TULLOS O. *Medical Arts Bldg.*
CUNNINGHAM, JOHN A. 209 *N. W. 13th St.*
DAILY, H. J. *Medical Arts Bldg.*
DANIELS, HARRY A. 610 *N. W. Ninth*
DeMAND, F. A. 1200 *N. Walker*
DERSCH, WALTER *Medical Arts Bldg.*
DEUPREE, HARRY L. *Medical Arts Bldg.*
DICKSON, GREEN K. 1200 *N. Walker*
DOUDNA, HUBERT E. 800 *N. E. 13th St.*
DOUGHERTY, VIRGIL *Sudan, Africa*
DOWDY, THOMAS W. *Medical Arts Bldg.*
DRUMMOND, N. ROBERT *Medical Arts Bldg.*
EARLY, RALPH O. *Medical Arts Bldg.*
EASTLAND, WILLIAM E. *Medical Arts Bldg.*
ELEY, N. PRICE 400 *N. W. 10th St.*
ELLIS, STEPHEN S. 610 *N. W. Ninth*
EMENHISER, LEE K. *Medical Arts Bldg.*
ERWIN, FRANZ B. *Medical Arts Bldg.*
ESKRIDGE, J. B., JR. 1200 *N. Walker*
FARIS, BRUNEL D. *Medical Arts Bldg.*
FELTS, GEORGE R. 1200 *N. Walker*
FERGUSON, E. GORDON *Medical Arts Bldg.*
FERGUSON, E. S. *Medical Arts Bldg.*
FISHMAN, C. J. 132 *N. W. Fourth*
FITZ, R. J. *North China*
FLESHER, THOMAS H. *Edmond*
FOERSTER, HERVEY A. *Medical Arts Bldg.*
FORD, HARRY C. *Medical Arts Bldg.*
FRIERSON, S. E. *Medical Arts Bldg.*
FULTON, C. C. *Medical Arts Bldg.*
FULTON, GEORGE *Amer. Natl. Bank*
GALBRAITH, HUGH M. 717 *N. Robinson*
GALLAGHER, C. A. 610 *N. W. Ninth*
GARRISON, GEORGE H. 1200 *N. Walker*
GEE, O. J. *Medical Arts Bldg.*
GIBBS, ALLEN G. *Ramsey Tower*
GLOMSET, JOHN L. 1200 *N. Walker*
GOLDFAIN, E. *Medical Arts Bldg.*
GOODWIN, R. Q. *Medical Arts Bldg.*
GRAHAM, A. T. 26 *S. W. 25th St.*
HALL, CLARK H. *Medical Arts Bldg.*
HARBISON, FRANK *Terminal Bldg.*
HARBISON, J. E. *Terminal Bldg.*
HARRIS, HENRY W. 1200 *N. Walker*
HASKETT, PAUL E. *Hales Bldg.*
HASSLER, GRACE C. *Medical Arts Bldg.*
HATCHETT, JOHN A. 1329 *Classen*
HAYES, BASIL A. 625 *N. W. Tenth*
HAZEL, ONIS G. 1200 *N. Walker*
HEATLEY, JOHN E. *Medical Arts Bldg.*
HERRMANN, JESS D. *Medical Arts Bldg.*
HETHERINGTON, A. J. 2014 *Gatewood*
HICKS, FRED B. *Medical Arts Bldg.*
HIRSHFIELD, A. C. *Medical Arts Bldg.*
HOLLIDAY, J. R. *Medical Arts Bldg.*
HOLLINGSWORTH, C. EDWARD *Medical Arts Bldg.*
HOOD, F. REDDING 1200 *N. Walker*
HOWARD, R. M. 1200 *N. Walker*
HOWARD, ROBERT B. 1200 *N. Walker*
HUGGINS, J. R. 2225 *Exchange Ave.*
HULL, WAYNE M. 1200 *N. Walker*
HUNTER, GEORGE *County Court House*
HYROOP, GILBERT L. *Medical Arts Bldg.*
ISHMAEL, WILLIAM K. 605 *N. W. Tenth*
JACKSON, A. R. 2528½ *S. Robinson*
JACOBS, MINARD F. *Medical Arts Bldg.*
JANCO, LEON 10 *West Park*
JETER, HUGH 1200 *N. Walker*
JOLLY, W. J. 614 *N. W. 14th St.*
JONES, HUGH *Medical Arts Bldg.*
KELLER, W. F. *Medical Arts Bldg.*
KELSO, JOS. W. *Medical Arts Bldg.*
KELTZ, BERT F. *Medical Arts Bldg.*
KERNODLE, STRATTON E. *First National Bldg.*
KIMBALL, GEORGE H. *Medical Arts Bldg.*
KUHN, JOHN F., SR. *Medical Arts Bldg.*
KUHN, JOHN F., JR. *Medical Arts Bldg.*
KURZNER, MEYER 1200 *N. Walker*
LACHMANN, ERNST 801 *N. E. 13th St.*
LAIN, EVERETT S. *Medical Arts Bldg.*
LAMB, JOHN H. *Medical Arts Bldg.*
LAMBKE, PHIL M. 105 *N. W. 23rd St.*
LaMOTTE, GEORGE A. *Colcord Bldg.*
LANGSTON, WANN *Medical Arts Bldg.*
LEMON, C. W. *Medical Arts Bldg.*
LEONARD, CHARLES E. 531 *Fullerton Parkway Chicago, Ill.*
LINDSTROM, W. CARL *Medical Arts Bldg.*
LINGENFELTER, F. M. 1200 *N. Walker*
LITTLE, JOHN R. *Ramsey Tower*
LONG, LeROY *Medical Arts Bldg.*
LONG, LeROY D. *Medical Arts Bldg.*
LONG, WENDELL *Medical Arts Bldg.*
LOWRY, DICK 1200 *N. Walker*
LOWRY, TOM 1200 *N. Walker*
LOY, C. F. *Perrine Bldg.*
LUTON, JAMES P. *Medical Arts Bldg.*
LYON, JAMES I. *Edmond*

MACDONALD, J. C. 301 *N. W. 12th St.*
MARGO, ELIAS 605 *N. W. Tenth*
MARIL, JOSEPH J. *Medical Arts Bldg.*
MARTIN, J. T. 1200 *N. Walker*
MARTIN, HOWARD C. *Ramsey Tower*
McBRIDE, EARL D. 605 *N. W. Tenth*
McGEE, J. P. 1200 *N. Walker*
McHENRY, L. CHESTER *Medical Arts Bldg.*
McKAY, EDWARD D. *Episcopal Eye, Ear, Nose and Throat Hospital, Washington, D. C.*
McKINNEY, MILAM F. *Medical Arts Bldg.*
McLAUCHLIN, J. R. 112 *N. W. 14th St.*
McNEILL, P. M. *Medical Arts Bldg.*
McCHILING, GEORGE S. 1200 *N. Walker*
MELVIN, JAMES H. *Perrine Bldg.*
MESSENBAUGH, J. F. *Colcord Bldg.*
MILES, W. H. *Municipal Bldg.*
MILLS, R. C. *Hightower Bldg.*
MOOR, H. D. 801 *N. E. 13th St.*
MOORE, B. H. *Perrine Bldg.*
MOORE, ELLIS *Medical Arts Bldg.*
MOORMAN, FLOYD 1200 *N. Walker*
MOORMAN, L. J. 1200 *N. Walker*
MORGAN, C. A. *First National Bldg.*
MORLEDGE, WALKER 1200 *N. Walker*
MORRISON, H. C. 807 *N. W. 23rd St.*
MULVEY, BERT E. *Medical Arts Bldg.*
MURDOCH, RAYMOND L. *Medical Arts Bldg.*
MUSICK, E. R. *Medical Arts Bldg.*
MUSICK, V. H. *Medical Arts Bldg.*
MUSSIL, W. M. *Medical Arts Bldg.*
MYERS, RALPH E. 1200 *N. Walker*
NAGLE, PATRICK S. 1021 *N. Lee*
NEFF, EVERETT B. 1200 *N. Walker*
NICHOLSON, BEN H. 301 *N. W. 12th St.*
NOELL, ROBERT L. *Medical Arts Bldg.*
O'DONOGHUE, D. H. *Medical Arts Bldg.*
O'LEARY, CHARLES M. *Medical Arts Bldg.*
PATTERSON, ROBERT U. 700 *N. W. 18th St.*
PAULUS, D. D. 301 *N. W. 12th St.*
PAYTE, J. I. 2429 *Aurora Court*
PENICK, GRIDER *Colcord Bldg.*
PHELPS, A. S. *Medical Arts Bldg.*
PINE, JOHN S. *Medical Arts Bldg.*
POOLE, WARREN *Medical Arts Bldg.*
POSTELLE, J. M. *Medical Arts Bldg.*
POUNDERS, CARROLL M. 1200 *N. Walker*
PRICE, JOEL S. 1200 *N. Walker*
RANDEL, HARVEY O. *Medical Arts Bldg.*
RECK, JOHN A. *Colcord Bldg.*
RECORDS, JOHN W. 301 *N. W. 12th St.*
REED, HORACE 1200 *N. Walker*
REED, JAMES R. *Medical Arts Bldg.*
REICHMANN, RUTH S. 124 *N. W. 15th St.*
RICKS, JAMES R. *Medical Arts Bldg.*
RIELY, LEA A. *Medical Arts Bldg.*
RILEY, J. W. 119 *N. W. Fifth*
ROBINSON, J. H. 301 *N. W. 12th St.*
RODDY, JOHN A. *Ramsey Tower*
ROGERS, GERALD 1200 *N. Walker*
ROSENBERGER, F. E. *Perrine Bldg.*
ROUNTREE, C. R. 1200 *N. Walker*
RUCKS, W. W., JR. 301 *N. W. 12th St.*
RUCKS, W. W., SR. 301 *N. W. 12th St.*
SADLER, LeROY 1200 *N. Walker*
SALOMON, A. L. 1200 *N. Walker*
SANGER, FENTON A. *Key Building*
SERWER, MILTON J. 1200 *N. Walker*
SEWELL, DAN R. 400 *N. W. Tenth*
SHACKELFORD, JOHN W. *State Health Dept.*
SHELBY, HUDSON S. *Hales Bldg.*
SHELTON, J. W. *Medical Arts Bldg.*
SHEPPARD, MARY V. S. 1200 *N. Walker*
SHORBE, HOWARD B. 605 *N. W. Tenth*
SMITH, CHARLES A. 717 *N. Robinson*
SMITH, DELBERT G. *First National Bldg.*
SMITH, RALPH A. 443½ *N. W. 23rd St.*
SNOW, J. B. 1200 *N. Walker*
STANBRO, GREGORY E. *Medical Arts Bldg.*
STARRY, L. J. 1200 *N. Walker*
STONE, S. N. *Edmond*
STOUT, MARVIN E. 209 *N. W. 13th St.*
STRECKER, W. E. *Medical Arts Bldg.*
SULLIVAN, ELIJAH S. *Medical Arts Bldg.*
TABOR, GEORGE R. 120 *N. Robinson*
TAYLOR, CHARLES B. *Medical Arts Bldg.*
TAYLOR, W. M. 1200 *N. Walker*
THOMPSON, WAYMAN J. 1200 *N. Walker*
TOOL, DONOVAN *Edmond*
TOWNSEND, CARY W. *Medical Arts Bldg.*
TRENT, ROBERT I. *Medical Arts Bldg.*
TURNER, HENRY H. 1200 *N. Walker*
VAHLBERG, E. R. *Perrine Bldg.*
VON WEDEL, CURT 610 *N. W. Ninth*
WAILS, THEODORE G. *Medical Arts Bldg.*
WAINWRIGHT, TOM L. *Medical Arts Bldg.*
WARMACK, J. C. 200 *N. W. 16th St.*
WATSON, I. N. *Edmond*
WATSON, O. ALTON 1200 *N. Walker*
WATSON, R. D. *Britton*
WEIR, MARSHALL W. *Ramsey Tower*
WELLS, EVA *Medical Arts Bldg.*
WELLS, LOIS LYON 800 *N. E. 13th St.*
WELLS, WALTER W. *Medical Arts Bldg.*
WESTFALL, L. M. *Medical Arts Bldg.*
WEST, W. K. 1200 *N. Walker*
WHITE, ARTHUR W. *Medical Arts Bldg.*
WHITE, OSCAR R. 1200 *N. Walker*
WHITE, PHIL E. *Perrine Bldg.*
WILDMAN, S. F. *Medical Arts Bldg.*
WILKINS, HARRY *Medical Arts Bldg.*
WILLIAMS, LEONARD C. 1200 *N. Walker*
WILLIAMSON, W. H. 128 *N. W. 14th St.*
WILLIE, JAMES A. *Medical Arts Bldg.*
WILSON, KENNETH J. *Medical Arts Bldg.*
WITTEN, HAROLD B. *Harrah*
WOLFF, JOHN POWERS 1200 *W. Walker*
WOODWARD, NEIL W. 1200 *N. Walker*
WRIGHT, HARPER 318 *S. W. 25th St.*
YOUNG, A. M., JR. *Medical Arts Bldg.*
YOUNG, A. M. 3rd *Medical Arts Bldg.*

OKMULGEE

ALEXANDER, LIN *Okmulgee*
ALEXANDER, ROBERT L. *Okmulgee*
BOLLINGER, I. W. *Henryetta*
BOSWELL, H. D. *Henryetta*
CARLOSS, T. C. *Morris*
CARNELL, M. D. *Okmulgee*
COTTERAL, J. R. *Henryetta*
EDWARDS, J. G. *Okmulgee*
GILSMANN, M. B. *Okmulgee*
HOLMES, A. R. *Henryetta*
HUDSON, W. S. *Okmulgee*
KILPATRICK, G. A. *Henryetta*
LESLIE, S. B. *Okmulgee*
MABEN, CHARLES S. *Okmulgee*
MATHENEY, J. C. *Okmulgee*
McKINNEY, G. Y. *Henryetta*
MING, C. M. *Okmulgee*
MITCHENER, W. C. *Okmulgee*
RAINS, HUGH L. *Okmulgee*
RODDA, E. D. *Okmulgee*
SIMPSON, N. N. *Henryetta*
SMITH, C. E. *Henryetta*
TRACEWELL, GEORGE L. *Okmulgee*
VERNON, W. C. *Okmulgee*
WATSON, F. S. *Okmulgee*

OSAGE

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BAYLOR, RICHARD A. *Fairfax*
DALY, JOHN F. *Pawhuska*
DOZIER, BARCLAY E. *Shidler*
ETHERTON, MONTE C. *C. C. C. Camp, Pawhuska*
GOVAN, THOMAS P. *Pawhuska*
GUILD, CARL H. *Shidler*
HEMPHILL, GEORGE K. *Pawhuska*
HEMPHILL, PAUL H. *Pawhuska*
KARASEK, MATTHEW *Shidler*

KIMBALL, M. C. *Webb City*
LIPE, EVERETT N. *Fairfax*
LOGAN, C. K. *Hominy*
RAGAN, TILLMAN A. *Fairfax*
SMITH, RAYMOND O. *Hominy*
SULLIVAN, B. F. *Barnsdall*
WALKER, G. I. *Hominy*
WALKER, ROSCOE *Pawhuska*
WEIRICH, COLIN REID *Pawhuska*
WILLIAMS, CLAUDE W. *Pawhuska*
WORTEN, DIVONIS *Pawhuska*

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BARRY, J. R. *Picher*
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COLVERT, GEORGE W. *Miami*
CONNELL, M. A. *Picher*
COOGAN, J. H. *Miami*
CRAIG, J. W. *Miami*
CUNNINGHAM, P. J. *Miami*
DeARMAN, M. M. *Miami*
DeTAR, GEORGE A. *Miami*
DUEWALL, R. H. *Miami*
HAMPTON, J. B. *Commerce*
HETHERINGTON, L. P. *Miami*
HUGHES, A. R. *Afton*
JACOBY, J. SHERWOOD *Commerce*
KERR, WALTER C. H. *Picher*
McNAUGHTON, G. P. *Miami*
MILLER, H. K. *Fairland*
RALSTON, BENJAMIN W. *Commerce*
RITCHEY, H. C. *Picher*
RUSSELL, RICHARD *Picher*
SAYLES, W. JACKSON *Miami*
SHELTON, B. WRIGHT *Miami*
SIEVER, CHARLES M. *Picher*
SMITH, W. B. *Fairland*
STAPLES, J. H. L. *Afton*
WORMINGTON, F. L. *Miami*

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JONES, R. E. *Pawnee*
LeHEW, ELTON *Pawnee*
LeHEW, J. L. *Pawnee*
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SADDORIS, M. L. *Cleveland*
SPAULDING, H. B. *Ralston*

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CLEVERDON, L. A. *Stillwater*
DAVIS, BENJAMIN *Cushing*
DAVIDSON, W. N. *Cushing*
FRIEDEMANN, PAUL W. *Stillwater*
FRY, POWELL E. *Stillwater*
HACKLER, JOHN F. *Stillwater*
HARRIS, E. M. *Cushing*
HOLBROOK, R. W. *Perkins*
LEATHEROCK, R. E. *Cushing*
MANNING, H. C. *Cushing*
MARTIN, E. O. *Cushing*
MARTIN, JOHN F. *Stillwater*
MARTIN, JOHN W. *Cushing*
MITCHELL, L. A. *Stillwater*
OEHLSCHLAGER, F. KEITH *Yale*
PERRY, DAN L. *Cushing*
PETER, MAURICE L. *Stillwater*
PUCKETT, HOWARD L. *Stillwater*
RICHARDSON, P. M. *Cushing*
ROBERTS, R. E. *Stillwater*
SMITH, A. B. *Stillwater*
SMITH, HASKELL *Stillwater*
STEVENSON, DORA WILEY *Stillwater*
THOMPSON, W. C. *Stillwater*
WAGGONER, ROY E. *Stillwater*
WALTRIP, J. R. *Yale*
WILHITE, L. R. *Perkins*
WRIGHT, J. M. *Stillwater*

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RAMSEY, W. G. *McAlester*
RICE, O. W. *McAlester*
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STOUGH, A. R. *McAlester*
WAIT, W. C. *McAlester*
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WILLIAMS, C. O. *McAlester*
WILLOUR, L. S. *McAlester*
WILSON, HERBERT A. *McAlester*

PONTOTOC

BRECO, J. G. *Ada*
BRYDIA, CATHERINE *Ada*
CANADA, ERNEST A. *Ada*
COWLING, ROBERT E. *Ada*
CUMMINGS, I. L. *Ada*
DEAN, W. F. *Ada*
EVANS, R. ERLE *Ada*
GULLATT, E. M. *Ada*
LEWIS, E. F. *Ada*
LEWIS, M. L. *Ada*
McBRIDE, OLLIE *Ada*
McKEEL, SAM A. *Ada*
MILLER, O. H. *Ada*
MOREY, J. B. *Ada*
MUNTZ, E. R. *Ada*
MURRAY, E. C. *Ada*
NEEDHAM, C. F. *Ada*
PETERSON, W. G. *Ada*
ROSS, S. P. *Ada*
RUTLEDGE, J. A. *Ada*
SUGG, A. R. *Ada*
WEBSTER, HARRELL *Ada*
WEBSTER, M. M. *Ada*
WELBORN, O. E. *Ada*

POTTAWATOMIE

ALLEY, RALPH M. *Shawnee*
ANDERSON, R. M. *Shawnee*
BALL, W. A. *Wanette*
BAKER, M. A. *Shawnee*
BAXTER, GEORGE S. *Shawnee*
BROWN, R. A. *Prague, R.F.D.*
BYRUM, J. M. *Shawnee*
CAMPBELL, H. G. *St. Louis, Okla.*
CARSON, F. L. *Shawnee*
CARSON, JOHN M. *Shawnee*
CORDELL, U. S. *McComb*
CULBERTSON, R. R. *Maud*
CULLUM, J. E. *Earlsboro*
FORTSON, J. L. *Tecumseh*
GALLAHER, CLINTON *Shawnee*
GALLAHER, PAUL *Shawnee*
GALLAHER, W. M. *Shawnee*
GASTON, JOHN I. *Shawnee*
GILLICK, DAVID W. *Federal Bldg., Oklahoma City*
HASSLER, F. R. *Shawnee*
HUGHES, HORTON E. *Shawnee*
HUGHES, J. E. *Shawnee*
IRBY, J. P. *Maud*

KAYLER, R. C. *McLoud*
KEEN, FRANK M. *Shawnee*
MATTHEWS, W. F. *Tecumseh*
McFARLING, A. C. *Shawnee*
McFARLING, JOHN *Shawnee*
NEWLIN, FRANCIS P. *Shawnee*
PARAMORE, C. F. *Shawnee*
RICE, E. EUGENE *Shawnee*
ROWLAND, T. D. *Shawnee*
WALKER, J. A. *Shawnee*
WILLIAMS, ALPHA McADAMS *Shawnee*
YOUNG, C. C. *Shawnee*

PUSHMATAHA

CONNALLY, D. W. *Antlers*
HUCKABY, B. M. *Antlers*
KIRKPATRICK, J. *Tuskahoma*
LAWSON, JOHN S. *Clayton*
PATTERSON, E. S. *Antlers*
RICE, P. B. *Antlers*

ROGERS

ANDERSON, F. A. *Claremore*
ANDERSON, P. S. *Claremore*
ANDERSON, W. D. *Claremore*
BESON, CLYDE W. *Claremore*
BIGLER, E. E. *Claremore*
CALDWELL, C. L. *Chelsea*
COLLINS, B. F. *Claremore*
HOWARD, W. A. *Chelsea*
JENNINGS, K. D. *Chelsea*
MELOY, R. C. *Claremore*
NELSON, D. C. *Claremore*

SEMINOLE

CHAMBERS, CLAUDE S. *Seminole*
DEATON, A. N. *Wewoka*
GIESEN, A. F. *Konawa*
HARBER, J. N. *Seminole*
HARTSHORNE, WILLIAM O. *Cromwell*
HUDDLESTON, W. T. *Konawa*
JONES, RUTH *Seminole*
JONES, W. E. *Seminole*
KNIGHT, CLAUDE B. *Wewoka*
LYONS, D. J. *Seminole*
LYTLE, WILLIAM R. *Seminole*
MILLS, N. W. *Seminole*
MOSHER, D. D. *Seminole*
PACE, L. R. *Seminole*
PRICE, J. T. *Seminole*
REEDER, H. M. *Konawa*
SHANHOLTZ, MACK I. *Seminole*
STEPHENS, A. B. *Seminole*
TERRY, JOHN B. *Wewoka*
VAN SANDT, GUY B. *Wewoka*
VAN SANDT, MAX M. *Wewoka*
WALKER, A. A. *Wewoka*

SEQUOYAH

MORROW, J. A. *Sallisaw*

STEPHENS

COKER, JOHN K. *Duncan*
GARRETT, S. S. *Duncan*
IVY, WALLIS S. *Duncan*
KING, E. G. *Duncan*
McCLAIN, W. Z. *Marlow*
McMAHAN, A. M. *Duncan*
PATTERSON, J. L. *Duncan*
RICHARDSON, R. W. *Duncan*
SMITH, L. P. *Marlow*
TALLEY, C. N. *Marlow*
THOMASSON, E. B. *Duncan*
WALKER, W. K. *Marlow*
WATERS, CLAUDE B. *Duncan*
WEEDN, A. J. *Duncan*

TEXAS

BLACKMER, L. G. *Hooker*
BLUE, JOHNNY A. *Guymon*
HALL, HARRY B. *Boise City*
HAYES, R. B. *Guymon*
HEADY, E. E. *Goodwell*
LEE, DANIEL S. *Guymon*
MacLEOD, D. R. *Hooker*
OBERMILLER, R. G. *Texhoma*
SMITH, MORRIS *Guymon*
THURSTON, HARRY E. *Texhoma*

TILLMAN

ALLEN, C. C. *Frederick*
ARRINGTON, J. E. *Frederick*
BACON, O. G. *Frederick*
BOX, O. H., JR. *Grandfield*
CHILDERS, J. E. *Tipton*
COLLIER, E. K. *Frederick*
DAVIS, W. W. *Nocona, Texas*
FISHER, R. L. *Frederick*
FOSHEE, W. C. *Grandfield*
FRY, F. P. *Frederick*
FUQUA, W. A. *Grandfield*
OSBORN, JAMES D. *Frederick*
SPURGEON, T. F. *Frederick*

TULSA

ADAMS, R. M. 501 *N. Boulder*
ALLEN, V. K. *Medical Arts Bldg.*
ARMSTRONG, O. C. *Medical Arts Bldg.*
ATCHLEY, R. Q. *Medical Arts Bldg.*
ATKINS, P. N. *Medical Arts Bldg.*
BARHAM, J. H. 314 *Daniels Bldg.*
BEESLEY, W. W. *Medical Arts Bldg.*
BEYER, J. W. 621 *McBirney Bldg.*
BRADFIELD, S. J. *Medical Arts Bldg.*
BRADLEY, C. E. *Medical Arts Bldg.*
BRASWELL, JAMES C. *Medical Arts Bldg.*
BROGDEN, J. C. *Medical Arts Bldg.*
BROWNE, HENRY S. *Medical Arts Bldg.*
BRYAN, W. J., JR. *Medical Arts Bldg.*
CALHOUN, C. E. *Sand Springs*
CALHOUN, W. H. *Medical Arts Bldg.*
CAMERON, PAUL B. *Springer Clinic*
CARNEY, A. B. 402 *Atlas Life Bldg.*
CHALMERS, J. S. *Sand Springs*
CHILDS, D. B. 1226 *S. Boston*
CHILDS, H. C. 1226 *S. Boston*
CHILDS, J. W. 1226 *S. Boston*
CLINTON, FRED S. 117 *N. W. Third*
CLULOW, GEORGE H. 1307 *S. Main*
COHENOUR, E. L. *Medical Arts Bldg.*
COOK, W. ALBERT *Medical Arts Bldg.*
COULTER, T. B. 1011 *Medical Arts Bldg.*
CRAWFORD, WILLIAM S. *Nat'l Bank of Tulsa Bldg.*
CRONK, FRED Y. *Medical Arts Bldg.*
DAILY, R. E. *Bixby, Okla.*
DAVIS, A. H. 710 *Medical Arts Bldg.*
DAVIS, G. M. *Bixby, Okla.*
DAVIS, T. H. *Medical Arts Bldg.*
DEAN, W. A. *Medical Arts Bldg.*
DUNLAP, ROY W. *Medical Arts Bldg.*
EADS, C. H. *Medical Arts Bldg.*
EDWARDS, D. L. 203 *Philcade Bldg.*
EVANS, HUGH J. *Medical Arts Bldg.*
EWELL, WILLIAM C. 1307 *S. Main*
FARRIS, H. LEE 303 *Medical Arts Bldg.*
FLACK, F. L. *Nat'l Bank of Tulsa Bldg.*
FORD, R. B. 305 *Braniff Bldg.*
FULCHER, JOSEPH *Medical Arts Bldg.*
GARRETT, D. L. *Medical Arts Bldg.*
GILBERT, J. B. 307 *Braniff Bldg.*
GODDARD, R. K. *Skiatook, Okla.*
GOODMAN, SAMUEL *Medical Arts Bldg.*
GORRELL, J. F. *Medical Arts Bldg.*
GRAHAM, HUGH C. 1307 *S. Main*
GREEN, HARRY *Medical Arts Bldg.*
GROSSHART, PAUL *Medical Arts Bldg.*
HARALSON, C. H. *Medical Arts Bldg.*
HARDMAN, T. J. *Medical Arts Bldg.*
HARRIS, BUNN *Jenks, Okla.*
HAYS, LUVERN *Medical Arts Bldg.*
HENDERSON, F. W. 315 *Medical Arts Bldg.*
HENRY, G. H. *Medical Arts Bldg.*
HOKE, C. C. 207 *Philtower Bldg.*
HOOVER, W. D. 201 *Philcade Bldg.*
HOTZ, CARL J. *Springer Clinic*
HOUSER, M. A. *Beacon Life Bldg.*

HUBER, W. A. *Medical Arts Bldg.*
HUDSON, DAVID V. *Medical Arts Bldg.*
HUDSON, MARGARET G. *Medical Arts Bldg.*
HUMPHREY, B. H. *Sperry, Okla.*
HUTCHISON, A. *Bixby, Okla.*
HYATT, E. G. *Springer Clinic*
JOHNSON, R. R. *Sand Springs, Okla.*
JONES, WILLIAM M. *Medical Arts Bldg.*
KEMMERLY, H. P. *Medical Arts Bldg.*
KRAMER, ALLEN C. *Medical Arts Bldg.*
LARRABEE, W. S. *Medical Arts Bldg.*
LAYTON, O. E. *Collinsville, Okla.*
LEE, J. K. 214 *Medical Arts Bldg.*
LeMASTER, D. W. *Medical Arts Bldg.*
LHEVINE, MORRIS B. *Medical Arts Bldg.*
LONEY, W. R. R. *Medical Arts Bldg.*
LOWE, J. O. 402 *Atlas Life Bldg.*
LYNCH, THOMAS J. 201 *Philcade Bldg.*
MacDONALD, D. M. 1729 *S. Utica*
MacKENZIE, IAN 511 *Medical Arts Bldg.*
MARGOLIN, BERTHA *Medical Arts Bldg.*
MARKLAND, J. D. *Medical Arts Bldg.*
MAYGINNIS, P. H. *Palace Bldg.*
McDONALD, J. E. *Medical Arts Bldg.*
McGILL, RALPH A. *Medical Arts Bldg.*
McKELLAR, MALCOLM *Springer Clinic*
McQUAKER, MOLLY 1648 *E. 13th St.*
MILLER, GEORGE H. 206 *Atlas Life Bldg.*
MISHLER, D. L. *Springer Clinic*
MITCHELL, THOMAS HALL *Nat'l Bank of Tulsa Bldg*
MOHRMAN, S. S. 611 *Daniels Bldg.*
MUNDING, L. A. *Medical Arts Bldg.*
MURDOCK, H. D. *Medical Arts Bldg.*
MURRAY, SILAS *Medical Arts Bldg.*
MYERS, F. C. 205 *Daniels Bldg.*
NEAL, JAMES H. 1944 *N. Denver Place*
NELSON, F. J. *Medical Arts Bldg.*
NELSON, F. L. 607 *Atlas Life Bldg.*
NELSON, I. A. *Medical Arts Bldg.*
NELSON, M. O. *Medical Arts Bldg.*
NESBITT, P. P. *Medical Arts Bldg.*
NORMAN, G. R. 17½ *N. Lewis*
NORTHRUP, L. C. 1307 *S. Main*
PAVY, C. A. *Medical Arts Bldg.*
PEDEN, JAMES C. 612 *Medical Arts Bldg.*
PERRY, HUGH 804 *Atlas Life Bldg.*
PERRY, J. C. 808 *Medical Arts Bldg.*
PIATT, A. D. *Newark, Ohio*
PIGFORD, A. W. *Medical Arts Bldg.*
PIGFORD, R. C. *Medical Arts Bldg.*
PITTMAN, COLE D. *Broken Arrow, Okla.*
PORTER, H. H. *Medical Arts Bldg.*
PRICE, H. P. *Medical Arts Bldg.*
RAY, R. G. 402 *Atlas Life Bdlg.*
REESE, K. C. *Medical Arts Bldg.*
REYNOLDS, J. L. 912 *Palace Bldg.*
RHODES, R. E. L. 509 *Medical Arts Bldg.*
ROGERS, J. W. *Medical Arts Bldg.*
ROTH, A. W. *Medical Arts Bldg.*
RUPRECHT, H. A. *Springer Clinic*
RUPRECHT, MARCELLA *Springer Clinic*
RUSHING, F. E. 505 *Medical Arts Bldg.*
RUSSELL, G. R. *Springer Clinic*
SCHRECK, PHILIP M. *Medical Arts Bldg.*
SEARLE, MAURICE J. *Medical Arts Bldg.*
SHAPIRO, DAVID *Atlas Life Bldg.*
SHEPARD, R. M. *Medical Arts Bldg.*
SHEPARD, S. C. *Medical Arts Bldg.*
SHERWOOD, R. G. 712 *Wright Bldg.*
SHIPP, J. D. *Medical Arts Bldg.*
SHOWMAN, W. A. *Medical Arts Bldg.*
SIMPSON, CARL F. *Medical Arts Bldg.*
SINCLAIR, F. D. *Springer Clinic*
SISLER, WADE *Mercy Hospital*
SMITH, D. O. *Springer Clinic*
SMITH, NED R. *Medical Arts Bldg.*
SMITH, ROY L. *Medical Arts Bldg.*
SMITH, RURIC N. *Medical Arts Bldg.*
SMITH, W. O. 203 *Philcade Bldg.*
SPANN, LOGAN A. 204 *Braniff Bldg.*
SPRINGER, M. P. *Springer Clinic*
STALLINGS, T. W. 724 *S. Elgin*
STEVENSON, JAMES *Medical Arts Bldg.*
STEWART, H. B. 2500 *E. 27th Place*
STUART, FRANK A. *Medical Arts Bldg.*
STUART, LEON H. *Medical Arts Bldg.*
SUMMERS, C. S. 611 *Daniels Bldg.*
SWANSON, K. F. *Springer Clinic*
TRAINOR, W. J. *Medical Arts Bldg.*
TURNBOW, W. R. *Medical Arts Bldg.*
UNDERWOOD, D. J. *Medical Arts Bldg.*
UNDERWOOD, F. L. *Medical Arts Bldg.*
UNGERMANN, A. H. *Medical Arts Bldg.*
VENABLE, S. C. 1135 *S. Quaker*
WALKER, WILLIAM A. 322 *Kennedy Bldg.*
WALL, GREGORY A. *Medical Arts Bldg.*
WARD, B. W. *Wright Bldg.*
WEST, T. H. *Medical Arts Bldg.*
WHITE, ERIC M. *Medical Arts Bldg.*
WHITE, N. S. *Medical Arts Bldg.*
WHITE, PETER COPE *Medical Arts Bldg.*
WILEY, A. RAY *Medical Arts Bldg.*
WOOD, W. M. 15 *W. 13th St.*
WOODSON, FRED E. *Medical Arts Bldg.*
ZINK, ROY 808 *Daniels Bldg.*

WAGONER

BATES, S. R. *Wagoner*
CRANE, FRANCIS S. *Wagoner*
PLUNKETT, J. H. *Wagoner*
RIDDLE, H. K. *Coweta*

WASHINGTON-NOWATA

ATHEY, J. V. *Bartlesville*
BEECHWOOD, E. E. *Bartlesville*
CHAMBERLIN, E. M. *Bartlesville*
COLLETTE, E. L., JR. *Dewey*
CRAWFORD, HORACE G. *Bartlesville*
CRAWFORD, JOHN E. *Bartlesville*
DAVIS, KIEFFER D. *Nowata*
DORSHEIMER, GEORGE V. *Dewey*
ETTER, FORREST S. *Bartlesville*
GENTRY, RAYMOND C. *Bartlesville*
GREEN, OTTO I. *Bartlesville*
HUDSON, LAWRENCE D. *Dewey*
KINGMAN, WILLIAM H. *Bartlesville*
KURTZ, R. L. *Nowata*
LANG, S. A. *Nowata*
LeBLANC, WILLIAM *Ochelata*
PARKS, SETH M. *Bartlesville*
REWERTS, FRED C. *Bartlesville*
ROBERTS, S. P. *Nowata*
RUCKER, RALPH W. *Bartlesville*
SCOTT, M. B. *Delaware*
SHIPMAN, WILLIAM H. *Bartlesville*
SMITH, JOS. G. *Bartlesville*
SOMERVILLE, OKEY S. *Bartlesville*
STAVER, BENJAMIN F. *Bartlesville*
TORREY, JOHN P. *Bartlesville*
VANSANT, JAMES P. *Dewey*
WEBER, HENRY C. *Bartlesville*
WEBER, SHERWELL G. *Bartlesville*
WELLS, CEPHAS J. *Bartlesville*
WORD, LEE B. *Bartlesville*

WASHITA

BENNETT, D. W. *Sentinel*
BUNGARDT, A. H. *Cordell*
DARNELL, E. E. *Colony*
HARMS, J. H. *Cordell*
JONES, J. PAUL *Dill*
LIVINGSTON, L. G. *Cordell*
McMURRY, JAMES F. *Sentinel*
NEAL, A. S. *Cordell*
TRACY, C. M. *Sentinel*
WEAVER, E. S. *Cordell*
WEBER, A. *Bessie*

WOODS

BENJEGERDES, THEODORE D. *Beaver*
CHEATWOOD, W. R. *Alva*
CLAPPER, E. P. *Waynoka*

DOUGAN, A. L. *Carmen*
ENSOR, DANIEL BOY *Hopeton*
GRANTHAM, ELIZABETH *Alva*
HALL, RAY LORMER *Waynoka*
HUNT, ISAAC S. *Freedom*
LaFON, WILLIAM F. *Waynoka*
McGREW, EDWIN A. *Beaver*
ROGERS, CHARLES A. *Marshall*
ROYER, CHARLES A. *Alva*
SIMON, JOHN F. *Alva*
SIMON, WILLIAM E. *Alva*
STEPHENSON, ISHMAEL F. *Alva*
STEPHENSON, W. L. *Cline*
TEMPLIN, OSCAR E. *Alva*
TRAVERSE, C. A. *Alva*

WOODWARD

BELL, J. T. *Woodward*
CAMP, E. F. *Buffalo*
CHUMLEY, C. P. *Supply*
DARWIN, D. W. *Woodward*
DAY, JOHN L. *Supply*
DUER, JOE *Taloga*
DUNCAN, J. C. *Forgan*
ENGLAND, MYRON *Woodward*
FORNEY, C. J. *Woodward*
HILL, H. K. *Laverne*
HILL, T. A. *Seiling*
JOHNSON, H. L. *Supply*
LEACHMAN, THAD C. *Woodward*
NEWMAN, FLOYD *Shattuck*
NEWMAN, M. H. *Shattuck*
NEWMAN, O. C. *Shattuck*
NEWMAN, ROY *Shattuck*
PIERSON, DWIGHT *Buffalo*
ROSE, WALTER L. *Woodward*
RUTHERFORD, V. M. *Woodward*
SILVERTHORNE, C. R. *Woodward*
TEDROWE, C. W. *Woodward*
TRIPLETT, T. BURKE *Mooreland*
VINCENT, DUKE W. *Vici*
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Summertime Use of Mead's Oleum Percomorphum

During the hot weather, when fat tolerance is lowest, many physicians have found it a successful practice to transfer cod liver oil patients to Mead's Oleum Percomorphum.

Due to its negligible oil content and its small dosage, this product does not upset the digestion, so that even the most squeamish patient can "stomach" it without protest.

There are at least two facts that strongly indicate the reasonableness of the above suggestion: (1) In prematures, to whom cod liver oil cannot be given in sufficient dosage without serious digestive upset, Mead's Oleum Percomorphum is the antiricketic agent of choice. (2) In Florida, Arizona, and New Mexico, where an unusually high percentage of sunshine prevails at all seasons, Mead's Oleum Percomorphum continues increasingly in demand, as physicians realize that sunshine alone does not always prevent or cure rickets.

Mead Johnson & Company, Evansville, Indiana, invite you to send for samples of Mead's Oleum Percomorphum for clinical use during the summer months to replace cod liver oil.

Obstetrics, Gynecology Examinations Set

The next written examination and review of case histories (Part 1) of the American Board of Obstetrics and Gynecology for Group B candidates will be held in various cities of the United States and Canada on Saturday, January 4, 1941, at 2:00 p.m. Candidates who successfully complete the Part I examinations proceed automatically to the Part II examinations held later in the year.

Applications for admission to Group B, Part I, examinations must be on file in the Secretary's office not later than October 5, 1940.

The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, Meeting at Cleveland, Ohio, immediately prior to the 1941 meeting of the American Medical Association.

After January 1, 1942, there will be only one classification of candidates, and all will be required to take Part I and Part II examinations.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh, (6) Pennsylvania.

First Texas Chemical Company Host to Baylor Graduates

The First Texas Chemical Manufacturing Company served as host to the graduating class of Baylor Medical College at an annual luncheon held at the Baker Hotel in Dallas May 25.

Addresses were made by Dr. Umphrey Lee, President of Southern Methodist University; Dr. Holman Taylor, Secretary of the Texas State Medical Association; and Dr. Tate Miller of Dallas. Dr. J. V. Goode was presented with the Annual, official publication of the University, by Dr. C. E. Carmack, who in turn had been presented by Dr. E. E. Mason, president of the class.

Others at the speakers' table were Mr. Earl V. Smyth, Vice-President of the Board of Trustees of Baylor University; Mr. J. S. Keene, President and General Manager of First Texas Chemical Manufacturing Company; Dr. W. H. Moursond, Dean of Baylor Medical College; Dr. J. B. Hilliard, Medical Director of Baylor Hospital; and Dr. W. H. Cousins, owner and publisher of the Southern Pharmaceutical Journal.

Vitamin Research Awards Given

A prize of $1,000 offered by Mead Johnson and Company for advances in knowledge of the vitamin B complex was awarded at the annual meeting of the American Institute of Nutrition in New Orleans, March 13, for two achievements in investigation.

The recipients were Dr. William H. Serbrell, Jr., National Institute of Health, Washington, D. C., for the discovery of riboflavin and its use in keratitis; and a group from the research laboratories of Merck and Company, Rahway, N. J., for synthesis of vitamin B6, now known as pyridoxine, John C. Keresztesy, Ph.D., Joseph R. Stevens, Ph.D., Stanton A. Harris, Ph.D., Eric T. Stiller, Ph.D., and Karl A. Folkers, Ph.D.

Deadline For Research Applications Set

The Finney-Howell Research Foundation, Baltimore, has announced January 1, 1941, as the closing date for filing applications for 1941 awards in cancer research.

Announcement also was made of a grant of $2,000 to Dr. George O. Gey to carry on his work in cancer at Johns Hopkins University School of Medicine. In addition, seven fellowships for investigation into the cause or causes and the treatment of cancer were renewed by the Foundation at its annual meeting in March and six new fellowships were awarded.

ASSOCIATION ACTIVITIES

Crippled Children's Commission Establishes New Service

The Federal Children's Bureau has recently granted the Oklahoma Commission for Crippled Children funds for the establishment of a rheumatic fever and heart service.

The work was started April 1 and is being carried out through the Department of Pediatrics of the Medical School and Crippled Children's Hospital. Clinics are held each Wednesday morning at the hospital. Each child goes through the general pediatric clinic for a thorough physical examination and then is referred to the heart clinic.

The grant also finances eight beds in the hospital for patients with active infection. When the patients are able to leave the hospital they are sent to their homes or to the foster home for continued care. When able, they are to return to the clinic for another examination. A clinic was held in Tahlequah April 16, and fourteen patients were examined.

Oklahoma is the first state started in the work. Several other states have now completed their organization and are ready to commence. Dr. Betty Huse and Dr. Frances C. Rothert of the Children's Bureau recently visited the clinic to observe the work.

Fifty-Two Are Graduated From University Medical School

Fifty-two students were graduated from the University of Oklahoma School of Medicine with degrees of doctor of medicine in graduation ceremonies June 3 in Norman.

The graduates are: E. Evans Chambers, Ausmon E. Culmer, Jr., Lynn Henry Harrison, Walter Kenneth Hartford, Phillis Emmaline Jones, William George McCreight, Williams David Maril, Warren Edward Richard, George Emery Meador, Jr., Robert Montgomery Mench, Elmer Ridgeway, Jr., Lal Duncan Threlkeld, George William Winkelman, all of Oklahoma City; Byron Wolverton Aycock, Lawton; Gerald Bednar, Chickasha; Spencer Henton Brown, Muskogee; William Howard Cantrell, Edmond; G. Shelton Cash, Lawton; Eugene Newton Davis, Wichita Falls, Texas; James Lowden Dennis, Britton; James Lowell Dixon, Mooreland; George Edward Dodson, Muskogee; Kemp Holman Dowdy, Tahlequah; Gayfree Ellison, Norman; Hugh Harvard Faust, Stillwater; David Fried, Hatfield, Ark.

Dale Allen Garrison; Lloyd Nance Gilliland, Jr., Frederick; James T. Godfrey, Jr., McAlester; Russell Cole Henry, Altus; H. Myles Johnson, Supply; Phillip George Joseph, Bristow; Robert Lewis Kendall, Strong City; Harold Theron Lehmann, Maud; Mason R. Lyons, Nowata; Coye Willard McClure, Hollis; Wiley Thomas McCollum, Waynoka; Robert Harold Mayes, Manitou; Ralph Warren Morton, Hennepin; Iron Hawthorne Nelson, Tulsa; Elder Dunham Padberg, Canton; Clara Frances Palmer, McAlester; Fowler Border Poling, Hollis; Kenneth N. Roberts, Keota; Rene Schnobelen, Mooreland; Milton H. Sebring, Holdenville; Frederick Victor Shadid, Elk City; Leland F. Shryock, Sharron; Frank Herbert Sisler, Bristow; Willard Haynes Smith, Newkirk; Claude Williams, Stigler; Russell H. Wilson, Eldorado.

Second Obstetrics Course Set To Open September 2

Completing the first of a series of post-graduate courses in practical and clinical obstetrics and allied subjects in Oklahoma City June 1, officials of the University of Oklahoma School of Medicine, sponsor of the course, have announced the second course to begin September 2.

Designed to furnish an opportunity for physicians to obtain at a minimum expense and in a minimum period of time a comprehensive review of the fundamentals of practical obstetrics, the course has successfully met its objectives, Dr. Edward N. Smith, director, said. The refresher course is of two weeks duration, and is to be repeated intermittently as circumstances and demand may justify. The Oklahoma State Health Department and the Children's Bureau of the Department of Labor are cooperating with the School of Medicine in sponsoring the course.

To assure personalized instruction, not more than four applicants will be accepted for each course, Dr. Smith pointed out. Registration fee of $25.00 is charged to cover breakage, depreciation on materials used, clerical expense and incidentals, but $10.00 of this is refunded at the completion of the course if there have been no unusual items of breakage or damage.

For additional information, correspondence should be addressed to the Department of Post-Graduate Obstetrics, Room 8, University Hospital, Oklahoma City.

The four-month post-graduate course in obstetrical nursing, which is being conducted by the same sponsors, has been postponed until July 1.

New Ward in Crippled Children's Hospital

A new ward of sixteen beds has been opened in the Crippled Children's Hospital for colored children. Half of the beds are for surgical patients and half for pediatric patients. The age limit in the ward is twelve years.

Dr. Earl D. McBride of Oklahoma City was a guest speaker at the annual session of the Kansas State Medical Society in Wichita May 13 to 16. Dr. McBride's subjects were "The Role of Surgery in Painful Feet," and "Disability Evaluation."

Dr. Raymond L. Murdoch and Dr. John F. Burton, both of Oklahoma City, read papers before the Garfield County Medical Society at its May meeting in Enid. Dr. J. M. Watson and Dr. O. R. Gregg, both of Enid, reported on the annual meeting of the Oklahoma State Medical Association, to which they were delegates.

Eighty-four out of the 117 pre-school children examined during the Parent-Teacher Association's annual health roundup in Ponca City need special medical attention, those in charge have announced.

Dr. Hugh Rasmussen of Tacoma, Wash., will become senior physician in charge of the 137-bed Kiowa Indian hospital in Lawton July 1. Dr. Rasmussen will succeed Dr. Earl Jones, senior physician for the last three years, who will go to Tacoma to head the clinical surgery department.

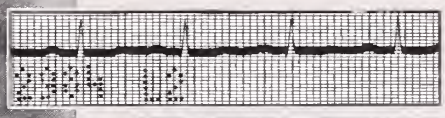
STUDIES IN THE AVITAMINOSES



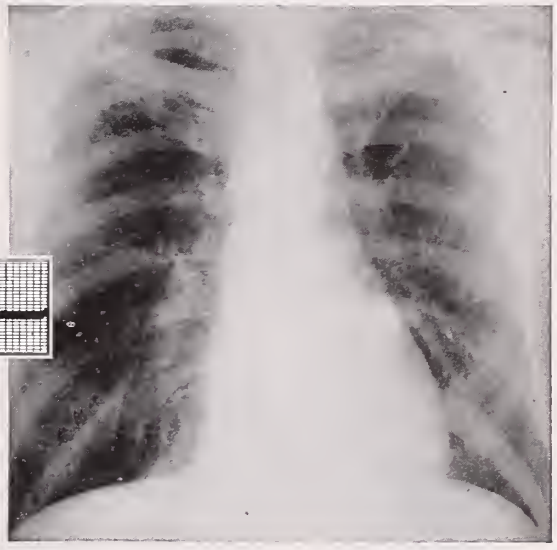
This page is the sixth of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the May 25 issue of The Journal of the American Medical Association.

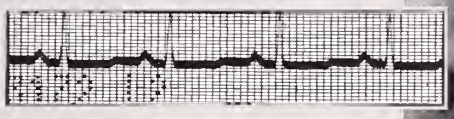


Teleoroentgenogram, at left, of alcoholic patient with severe thiamin deficiency, marked cardiac dilatation, congestive heart failure. X-ray below, taken after three weeks of thiamin chloride therapy, shows marked reduction in cardiac size. Patient received no digitalis.



Electrocardiogram on admission (Lead 2). Note the low voltage of the QRS complexes and of P and T waves. (Left)





After three weeks of thiamin chloride therapy. Note increased voltage, return of P waves. Later tracings showed normal T waves. (Lead 2)

Courtesy of Henry Field, Jr., M.D., University of Michigan.

The Cardiac Manifestations of Vitamin B_1 Deficiency

Vitamin B_1 apparently exerts no specific influence upon the normal heart, but profound deficiency resulting from drastic deprivation may lead to cardiac derangements which are as characteristic as the neural changes at times resulting from thiamin deprivation. In the cases reported, physical examination disclosed that the heart was enlarged to both the right and the left, although on postmortem examination of patients who died of extreme deficiency the enlargement was seen predominantly in the right auricle and ventricle. The former was dilated and paper thin; the wall of the latter appeared thickened and its chamber enlarged. Some difference of opinion exists concerning the mechanism of the increase in cardiac size, since both hypertrophy and edema have been observed by different investigators.

The clinician, through whose courtesy the x-rays and electrocardiograms shown above are made available, states that administration of thiamin chloride promptly led to reduction in the cardiac silhouette.

UPJOHN

News From The State Health Department

The services of Miss Margaret Le Coney, an experienced laboratory technician, are now available to physicians of the state who operate laboratories, Dr. G. F. Mathews, commissioner of the Oklahoma State Health Department announced June 1.

Miss Le Coney came to the Oklahoma Health Department after gaining several years experience in one of the larger clinics in Boston, and for several months was connected with the bacteriological division of the Massachusetts State Health Department Laboratory.

She also served in the United States Public Health Service venereal disease research laboratory at Staten Island, New York.

Arrangements have been completed for Miss Le Coney to work in laboratories of the state for periods of one or two weeks, for the purpose of aiding laboratory technicians in improving methods and techniques.

Her work in laboratories of Oklahoma was made possible by a grant of the Commonwealth Fund of New York City to the Oklahoma State Health Department, Doctor Mathews explained.

Funds for her services were given to the State Health Department, to be administered at the direction of Doctor Mathews.

This work, offered to private physicians who operate laboratories, is part of the program launched several years ago by the Oklahoma State Medical Association and the State Health Department to improve the medical care and services to the people.

Miss Le Coney is now working in the State Health Department laboratories, studying the methods employed there.

Information about her services may be obtained by contacting the State Health Department.

Tularaemia has been reported by private physicians 31 times within the past three months, with six of the cases traced definitely to the bite of a tick, Dr. G. F. Mathews, commissioner of the Oklahoma State Health Department has announced.

"This is the first time Oklahoma has had reports of tularaemia being spread by the bite of a tick, and indicates that although improvement is shown in the reporting of this disease, there is need for even greater attention to this matter," he said.

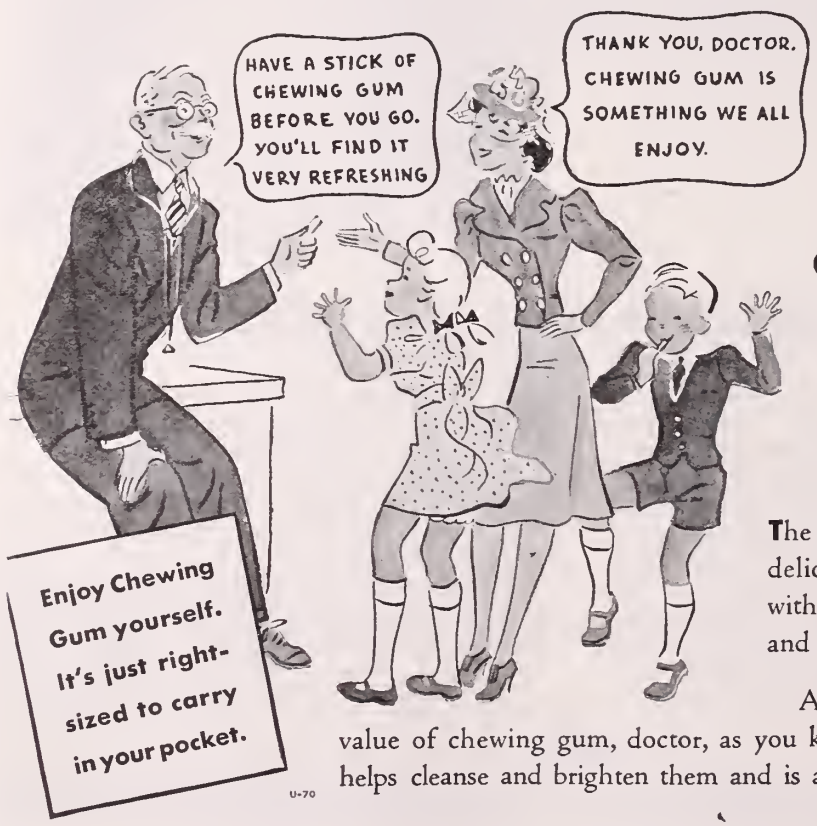
Tularaemia has been reported throughout the United States. In 1938 there were 2,088 cases with 139 deaths, a majority of those contracting the disease having skinned or handled wild rabbits. In 1939 the United States had 2,200 cases reported, with approximately 150 deaths expected when reports are completed. Over 90 per cent of the cases in the United States can be traced to the rabbit.

The disease, coming from the bite of a tick usually found on rabbits, commonly occurs in Oklahoma when the hunting season opens, and declines as the season closes. Oklahoma has had one death from tularaemia reported this spring.

An important factor in this respect is that the eastern, wooded area of the state has had most of the cases, LeFlore county leading with four reported.

(The following lists the counties, number of cases and dates reported)

County	No. Cases	Date
Craig	1	5-25
Ottawa	1	5-3
Mayes	2	3-7; 4-16
Cherokee	1	5-24
Muskogee	1	6-1
LeFlore	1	5-1; 5-1; 5-11; 5-21



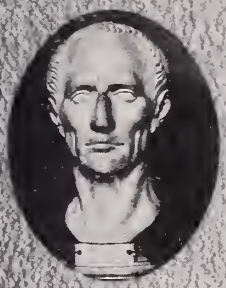
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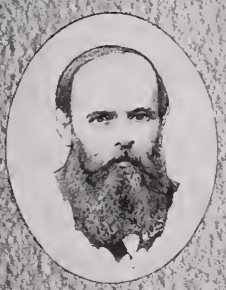
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McCurtain	1	3-7
Johnston	3	5-1; 5-19; 5-19
Payne	1	5-4
Oklahoma	1	4-6
Canadian	2	3-23; 3-3
Stephens	3	5-25; 4-16; 5-7
Custer	1	5-19
Woodward	1	5-7

(Other case reports taken from laboratory reports)

A study of the case reports shows that eight of them were people who had handled or skinned rabbits. Six were from the tick bite and the remaining 17 reports gave no information as to the source. "It is reasonable to assume that several of these 17 cases were due to the bite of a tick," Doctor Mathews stated.

Incomplete classification as to occupation showed that three Oklahoma farmers contracted tularaemia from the bite of a tick and one from handling a rabbit, while others infected from a rabbit included housewives, students and children.

Over half of the 31 cases were reported in May, indicating further activity of the tick.

First described in 1910, knowledge of tularaemia is the result of American research, and the disease is most prevalent among marketmen, hunters, housewives and others who dress rabbits with their bare hands.

Research has shown that tularaemia comes from the bite of a tick which may be found on wild rabbits, deer flies, horse flies, wood ticks and from streams or creeks which have been contaminated by water rats.

The state health department has laboratory facilities available for aid in diagnosing tularaemia.

"Whether or not the incidence of tularaemia is on the increase in Oklahoma cannot be determined, but the fact that six cases have been definitely traced to the bite of a tick shows that physicians are discovering the disease, and that it bears watching in this state," Doctor Mathews said.

• OBITUARIES •

Dr. J. C. Luster

Death came to Dr. J. C. Luster, pioneer Davis, Okla., physician, May 17 at his home in Davis following a heart attack. He was 64 years of age at the time of death.

Doctor Luster came to Davis on May 2, 1898, and was the oldest practicing physician in Murray County in point of years of service.

Survivors include Mrs. Luster; two daughters, Dorothy and Boyd Luster of Davis; two sisters, Mrs. Lula B. Dillon of St. Louis, Mo., and Mrs. Lillie Hancock of Dixon, Mo.; and one brother, Edgar Luster of Belle, Mo.

Funeral services were conducted from the Davis Christian church, of which he was a charter member, at 3:30 o'clock Sunday afternoon, May 19. Interment was in the Green Hill cemetery at Davis.

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*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

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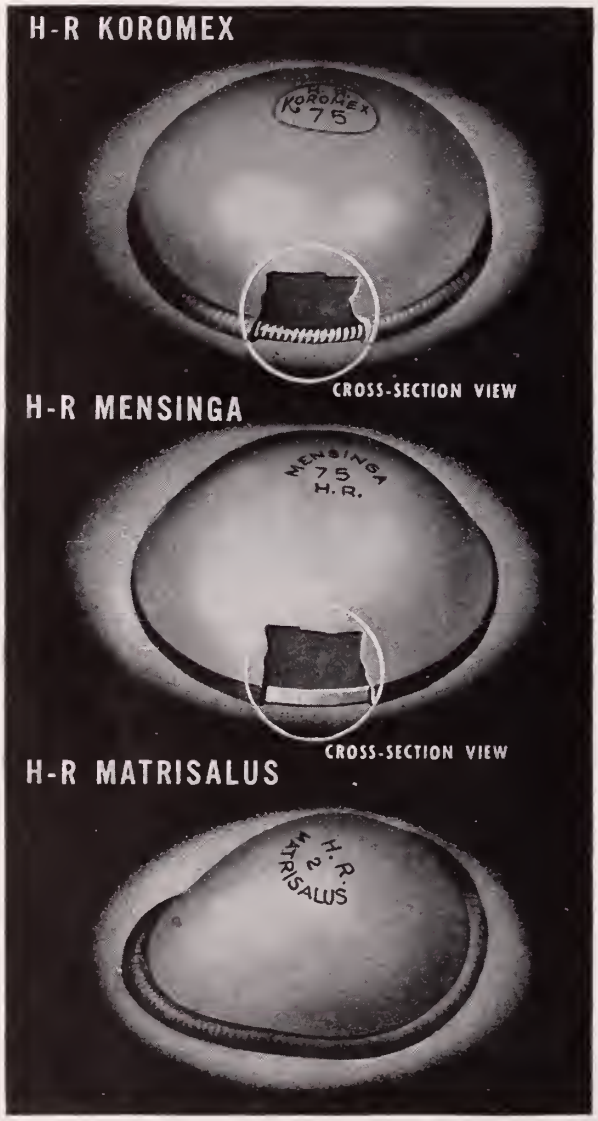
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ABSTRACTS : REVIEWS : COMMENTS and CORRESPONDENCE

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments From
LeRoy Long Clinic
714 Medical Arts Building, Oklahoma City

"The Treatment of Spontaneous, Threatened, or Habitual Abortion." By Conrad G. Collins, M.D., F.A.C.S., John C. Weed, B.S., M.D., and Jason H. Collins, B.S., New Orleans, Louisiana. Surgery Gynecology and Obstetrics, Volume 70, Number 4, April 1940, Page 783.

The authors begin by citing evidence to show that threatened or habitual abortion may be successfully treated with the anterior pituitary-like hormone or corpus luteal hormone, thyroid extract, and vitamin E.

The authors use wheat germ oil as a source of vitamin E. They have used it in the treatment of 36 cases of spontaneous, threatened, or habitual abortions, in combination with the anterior pituitary-like hormone, progesterone, and thyroid extracts. The daily maintenance dose ranged from 1 to 1½ drams unless the patient began to show signs of threatened abortion or showed signs of threatened abortion when first seen. Eight to twelve drams were given during the first 24 hours to these patients, and then the patients were placed on the daily maintenance dose. Oil was given until the patient reached 8 to 8½ calendar months pregnancy.

The anterior pituitary-like hormone in the form of antuitrin S was administered intramuscularly in 1 cubic centimeter doses at weekly intervals until the patient was pregnant 4 to 4½ calendar months.

One rabbit unit of progesterone was administered intramuscularly when cramping or bleeding was actually present. Upon cessation of these symptoms, progesterone was discontinued and antuitrin S instituted.

Thyroid extract in 1/10 to ½ grain doses twice a day was given to all patients showing evidence of hypothyroidism.

Cases were classified as "threatened abortion" if cramping pain in lower abdomen persisted longer than 24 hours or if a patient had any bleeding. Cases were classified as "habitual abortion" if patient had 2 or more spontaneous abortions.

Of 24 cases of threatened abortion treated as mentioned above, only 3 aborted. This represents a successful arresting of the abortion of 87% of these cases.

Of 12 cases of habitual abortion 9 have been delivered of normal, full term, healthy infants. Of the 3 who aborted, 1 was precipitated by an attack of malaria, and 1 was a missed abortion and really had a dead fetus when the treatments began. These 12 cases, prior to treatment, had a total of 21 pregnancies with only 3 births. With therapy, the same group, in 12 pregnancies delivered 9 full term, living children.

It is interesting to note that 3 of the patients stopped taking the wheat germ oil of their own accord and even though they were on maintenance doses of thyroid and progestin, they promptly began to abort, but on resumption of vitamin E therapy, cramping and bleeding ceased and the pregnancies proceeded with no further return of symptoms.

Warren Poole.

"Ectopic Pregnancy." Hilliard E. Miller, M.D., F.A.C.S. The American Journal of Surgery. April 1940, Volume XLVIII, No. 1, Page 47.

This study is a review of all cases of ectopic pregnancy which occurred in Touro Infirmary, New Orleans, from 1924 to 1936. However, in order to obtain a more accurate relationship of extra-uterine to uterine pregnancies, cases were added from six other New Orleans hospitals and an estimate of one ectopic in ever 171 pregnancies was made.

In considering the eventual termination of any extra-uterine pregnancy, three essential possibilities can occur: (1) Early death of fertilized ovum with complete resorption. (2) Development of fetus to term or advanced state with possibility of delivery by laporatomy or death followed by suppuration, skeletonization, lithopedion formation or saponification. (3) Rupture. If rupture results, three developments may take place: (1) Death of the embryo; (2) Reimplantation of embryo; (3) The placental attachment may survive at primary site, and the fetus continue to develop in a new position.

Regardless of manner of rupture or variety of ectopic pregnancy involved, there is almost universal hemorrhage into the peritoneal cavity of the mother. If the hemorrhage is profuse, exsanquination of the patient prevents the occurrence of further changes. If the hemorrhage is slow, an irritative, plastic peritonitis is incited, with a resulting hematocele.

Before rupture occurs, there are no symptoms other than those of early pregnancy, and a diagnosis of an early unruptured ectopic pregnancy is pure luck.

When rupture does occur, the history is very important in making a correct diagnosis. Usually there will have been a period of amenorrhea or delayed menstruation followed by spotting or vaginal bleeding which is not in rhythm with the normal menstrual cycle and which is most often dark brown or black in color.

Pain in the pelvis, usually recurring in cycles, is next most important point in history. It may be severe and lancinating or may resemble menstrual cramps. Radiation of pain to the thighs, back, and chest has been noted. Thirty-six percent of the cases felt fainty or did faint at onset of pain. Thirty per cent were in shock at the time of operation. Nausea or vomiting with onset of pain was present in 40% of the cases.

On examination, the most universal finding was tenderness in lower abdomen which was present in 81% of the cases. Rigidity was found in only 41.6 per cent and there was a palpable mass in 39% of the cases.

The statement is often found in literature that a relative sterility of long duration usually precedes the development of ectopic pregnancy. This is not borne out in the present study, for 62 of the 137 women were found to have been previously pregnant.

In 65 of the 137 cases, (47.2 per cent) a correct diagnosis was made. In 32 cases (23.5 per cent) ectopic was suspected, and in 40 cases (29.3 per cent) the diagnosis was entirely erroneous.

All cases of ectopic pregnancy should be subjected to operation as soon as possible after a diagnosis has been made. There is no such thing as expectant treatment for extra-uterine gestation because the prognosis becomes more serious the longer the operation is delayed. Parry collected records in 500 cases of ectopic pregnancies with 386 deaths. Of the deaths 174 or 52.8 per cent resulted from hemorrhage. Of these 174, duration of life is mentioned in 113. Of these 113, 71.7 per cent were dead in 24 hours and only 13 per cent were alive after 48 hours. These figures alone should impress one with the necessity for haste in the treatment of this condition.

No time should be wasted before surgery by transfusion or infusion in an attempt to rally these patients.

Such procedures can be carried out during an operation with greater benefit to the patient.

No more surgery should be done than is absolutely necessary to insure a primary postoperative recovery. Under no circumstance should a chronic appendix be removed, the uterus suspended, or the abdomen explored. The extravasated blood is best left in the patient's abdomen, for it is eventually absorbed, and any attempt to remove it prolongs the operation.

Mortality in any condition is dependent upon the skill of the physician, but it is estimated that the average mortality in the better hospitals is about 4% or under. In this series of 137 cases there were 3 deaths with a mortality rate of 3.6 per cent.

Warren Poole.

"The Relative Value of Catgut, Silk, Linen, and Cotton as Suture Materials." By William H. Meade, M.D., Jackson, Michigan, and Alton Ochsner, M.D., New Orelans, Louisiana, "Surgery", April, 1940, Volume 7, No. 4, Page 485.

This article is based upon an extensive investigation of the kinds of suture material indicated in the title. The purposes and scope of the investigation are indicated by this statement: "Because there had been no comprehensive comparative appraisal of a large number of suture materials, the present study was undertaken in order to evaluate the efficiency of catgut, silk, linen, and cotton."

As long ago as 1869 Lister discontinued the use of catgut because he was apparently under the impression that it predisposed to infection.

It appears that the fear of nonabsorbable suture material is associated with the fear that such a suture and this fear appears to be associated with the emphasis and this fear appears to be associated by the emphasis placed upon the presence of "foreign bodies," reported by pathologists to have been found in un-healed operative wounds.

There appears to have been much uncertainty and misunderstanding until the investigations and works of Kocher and Halsted in the 1880's. The work of Kocher and Halsted appeared to demonstrate the superiority of silk over catgut as suture material. Notwithstanding it has been between 50 years and 60 years since then, the question has not been settled in the mind of the average surgeon.

"It has been the opinion of most surgeons that the persistence of a suture after wound healing is detrimental and that in the presence of infection it alone is responsible for continuation of the infection." The authors, through their investigation, undertake to show that this opinion is erroneous. Based upon the results of their own investigations, coupled with the much earlier work of Kocher, Halsted, Whipple, Shambaugh, Howes and Harvey, it is believed that wound healing in the presence of catgut is definitely retarded, due to moisture, swelling, and premature absorption which is frequently associated with allergic situations in connection with certain individual patients. At the same time, there is a period of several days when there is relative weakness of the catgut sutures, and this relative weakness in connection with the coaptated wounds continues until the operative area is penetrated by fibroplasts, which grow into the area some days after the performance of the operation.

The authors have this to say about silk: "Silk should be clased as a nonabsorbable suture, although it is mainly protein. It is pliable, easily sterilized, and, when not serum-proofed or waxed, contains no chemical other than an iron dye."

"Whereas silk is mentioned in some of the earliest medical writings, by Celsus, Galen, and later Trotuia (A. D. 1050), it was not until 1888 that silk came into more general use because Kocher had so many infections with catgut." Halsted began the use of silk in this country about the same time.

It is indicated that silk is easily sterilized, that it is easy to handle, and that the knots are more stable than in the case of catgut.

There is reference to reports in the continental literature about a post operative difficulty in which there is a low grade inflammatory tumor at the site of operation. This was described by Schloffer in 1908. "The tumor may occur from months to years after the implantation of the silk and is cured by the removal of the silk from the center of the tumor." Whipple is quoted as suggesting that the tumor is the result of the use of too heavy silk.

It appears that linen, which is derived from flax, has been employed as suture material since the time of Antyllus (A. D. 200), but it was not used with uniformity. "About 1865, Pagenstecher, a German ophthalmologist, prepared linen by treating it with a celluloid solution. This made a much more pliable suture, giving considerable less friction and less serum absorption." The authors indicate that this is a very satisfactory type of suture material.

There is a very interesting discussion of suture materials derived from cotton, and two of the advantages are that cotton is easily obtainable, cheap, and, like silk, can be sterilized with heat without interferring with the efficacy of the suture material. It is indicated that the most satisfactory type of cotton thread is made from the long fibre Egyptian, or Sea Island cotton.

"Although cotton has been used as a ligature material by Gage, of Tulane University, and by Guerry, of Columbia, S. C., it has not been used for the major portion of their surgery. However, the experimental and clinical uses of this material were encouraged by seeing Gage use it frequently as a ligature."

The experimenters found that the tensile strength of linen and silk of the same size was about the same. The tensile strength of cotton is not as great as that of silk and linen, and sterilization by boiling reduces the tensile strength about 11%.

Sutures employed in experimental animals (rabbits) were removed after two, four, seven, ten, and fourteen days respectively. "Following removal they showed a decrease in tensile strength — except that the tensile strength of the cotton remained practically the same as that of the original suture." There was a loss of 20% in the tensile strength in four days, and the loss increased rapidly during the next few days. There was a loss of 30% of tensile strength in chromic catgut in four days, and a rapid reduction to a 50% decrease in seven days. The loss of tensile strength in silk was about the same as that of chromic catgut. The following is a very interesting and practical statement: "A cotton suture, No. 50 plain thread, remaining in human tissue (split skin graft) for a period of eighteen days showed only a 10% loss in strength."

After 48 hours, "There were moderate inflammatory reactions in the cutaneous tissues about both plain and chromic catgut, the latter being somewhat more pronounced than the former. The edema was much greater than that surrounding silk and cotton sutures." To sum up: "There were moderate inflammatory reactions, considerable swelling of the suture, and considerable edema about the linen sutures." In the neighborhood of the silk and cotton sutures, "There was slight edema, but no gross inflammatory change."

Comments: There are several important conclusions to be drawn from this remarkable report. First, the almost universal employment of catgut as suture material does not rest upon a basis that is altogether sound. Second, it is new and scientific support for the employment of silk, linen and cotton. Third, the experiment touching the employment of cotton sutures are of tremendous scientific and practical value. In emergencies, the average surgeon has had to resort to the employment of ordinary cotton thread taken out of the housewife's workbasket. If the material is sterilized by boiling, and other necessary surgical technique is applied, he is often gratified to see satisfactory healing of the wound and progress of the patient.

This is the type of article that should be preserved. It is comprehensive and entirely practical at the same

time. One of the valuable features is that the article is followed by a good bibliography.

LeRoy Long, Sr.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
911 Medical Arts Building, Tulsa

"Post-Cataract Hyphemia." A. Seymour Philips, F.R.C.S., London, England. Abstracted from the British Journal of Ophthalmology, March, 1940 and published in the May edition of the Digest of Ophthalmology and Otolaryngology.

Post-cataract Hyphemia has long been one of the bugbears of ophthalmic surgery, for though it does not often affect the ultimate visual result, it prolongs the patient's stay in hospital sometimes for several weeks. In an endeavor to ascertain the origin and fate of the blood in these patients I have collected and recorded 49 cases of hyphemia that occurred in the wards of two London Hospitals during the years 1937 and the greater part of 1938.

It was noticed that whatever the origin of the blood it is unaffected by the type of operation performed. If as has been frequently stated, the blood comes from the iris one would surely have expected a higher difference than 0.7 per cent between those cases where it was cut and those where if was not.

It is apparent that hyphemia can be divided into three groups.

1. Those occurring at the time of operation, probably from the conjunctival flap. It has often been noticed that hyphemia absorbs very rapidly and unless it is very large will have disappeared by the time the first dressing is done 48 hours later. In this survey I have included only those cases which persisted at the first dressing or occurred at a subsequent date and therefore very few of this type are mentioned in this paper.

2. Those occurring for the first time several weeks after the operation concurrently with an attack of iritis. They are prone to recur at frequent intervals and have a different origin from the next group.

3. Forty-two out of forty-nine cases fell into this group. They have the following characteristics: (a) they are not present when the patient leaves the operating table, (b) they occur between the second and the tenth days, and almost invariably between the second and sixth, (c) it is only very rarely that more than one single hemorrhage occurs, and the eye is usually free from blood in 2 to 3 weeks.

I have no doubt that those cases classed in Group 2 are inflammatory in nature and arise from the iris. In the remainder of this paper I am referring to group 3 unless otherwise stated.

HISTORY OF OCCURRENCE.—Ten patients gave a history of physical violence to the eye. In most cases this consisted of knocking the eye with the hand—usually on first waking up. This would be followed by a complaint of pain in the eye and on inspection a hyphemia was found.

Fifteen patients volunteered some such information as "I went back with rather a bump and after that my eye was painful." Or "I had an attack of sneezing, doctor." Or "I woke up with a start and my eye was painful."

In the remaining 17 patients the blood was found at a routine dressing and no complaint of pain was forthcoming from the patient unless perhaps following a leading question.

So that in spite of the fact that the patient or the nursing staff is often blamed for the trouble, in less than a quarter of the cases was there any evidence of a knock which might perhaps have been prevented by wearing a shield or tying the patient's hands.

TIME OF OCCURRENCE.—No case occurred before the second day, or after the tenth. The average for all cases was 3.7 days.

With regard to the disappearance of clots in the anterior chamber, I believe that the fibrin of the clot is dissolved by the aqueous humour and the cells are thus set free to be absorbed into the crypts of the iris, the aqueous having no direct action on them. I do not know how long it is possible for cells to remain intact in the A.C., but I have washed them out and examined them after they have been present for seven weeks and have found them intact.

ORIGIN OF THE BLOOD.—There are three sources from which it is possible for blood to enter the A.C., (a) the conjunctival flap, (b) the healing section and (c) the iris and ciliary body. Clearly it can only come from the conjunctiva during the operation. from the section while it is healing, but from the iris and ciliary body at any time.

I have assumed that those hemorrhages that occur at operation are mostly conjunctival in origin, while those that occur more than three weeks after operation are from the iris, and thus the real point at issue is the source of the 42 cases that arose between the second and the tenth days. Since it is only very rarely that a hyphemia is seen in the act of formation it follows that the source of the blood must be a matter of deduction from circumstantial evidence.

I believe the manner in which hemorrhage occurs is as follows. Repair of a section takes place by means of blood vessels growing down from the conjunctival and episcreral vessels. Owing to the tension of the eye a cataract section always gaps to some extent, and this gap is made good by young vascular tissue. Should the patient now squeeze his lids, this will cause deformation of the eyeball and separation of the wound edges and thus rupture of the young blood vessels uniting them. When this happens the vessel bleeds, usually in the line of least resistance into the A.C., but occasionally subconjunctivally as well.

Corneoscleral Sutures.—After the cases in this paper had been collected corneoscleral sutures were introduced at one of the hospitals where I was working. For a period of six months this stitch was used on every cataract extraction by one of the surgeons, and during this time no single case of post-cataract hyphemia occurred in his cases. The stitch has now been used on over 120 consecutive cases without a hemorrhage.

Regarding the source of the blood, opinion has lately been changing, and while most of the older writers thought that it came from the iris many of the younger ones believe that it comes from the section. The matter is clearly one which it is impossible to decide by examining hospital notes, and I think that when the effect of using corneoscleral sutures becomes more widely

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known, opinion on this matter will become more unanimous than it is at present.

"The Pathology of Thrombo-Phlebitis of the Lateral Sinus." G. Turner. (Bollettino delle Malattie del 'Orecchio, della Gola e del Naso, 1939, lvii, 445.) Abstract published in The Journal of Laryngology and Otology, March, 1940.

The author recalls that the lateral sinus receives blood not only from the longitudinal and straight sinuses but also from four groups of veins. They are:

(a) The veins of the dura mater.
(b) The veins of the diploe.
(c) The transtemporal veins.
(d) The petrosal sinuses.

The blood of the external and middle ears reaches the sinus through the transtemporal veins, that of the internal ear and petrous bone through the petrosal sinuses.

The author discusses the formation of clots in the sinus and the extent to which they may be spread. He describes experiments where the wall of the sinus has been cauterized giving rise to a mural thrombus. Septic material was applied to such a damaged wall and the clot became infected. The septic material was applied to a non-cauterized sinus wall and a clot was produced in about twenty-four hours. In some cases however, pyaemia occurred without the formation of a clot, evidently by the passage of the organisms straight through the wall into the blood stream. The author discusses at length the treatment of thrombosis of the lateral sinus and has concluded that the clot should always be removed but that it is rarely necessary to ligature the internal jugular vein. This manipulation must however be carried out where there is any sign of pyaemic infection.

"Argyria Resulting From Intranasal Medication." Ben L. Bryant, M.D., Los Angeles, Calif. Published in the April edition of the Digest of Ophthalmology and Otolaryngology 1940. The Original article in Archives of Otolaryngology January 1940.

Despite the warnings that have appeared occasionally in all the literature, many otolaryngologists still deny the danger of the production of generalized argyria from the use of silver-containing intranasal medication.

The physician who has seen even a single victim of full-blown argyrosis, with its typical generalized pigmentation of the skin, giving the patient a bronzed blue or slate color which has been described aptly as the appearance of a corpse suddenly come to life, must necessarily have been impressed with the importance of preventing such a condition. Prevention is actually the only treatment, for, although Stillians and others have shown that by painstaking and multitudinous injections of a 1 per cent solution of potassium ferrocyanide and a 6 per cent solution of sodium thiosulfate in distilled water the skin of the face and neck can be cleared of the pigmentation, a person with the general discoloration due to the distribution of silver will retain it for all his days.

In the earliest cases reported argyria was caused by the internal use of silver nitrate, but as this form of therapy was relinquished the incidence of argyria naturally diminished, until, within the past generation, the use in the nose and throat of medication containing silver was introduced, with the resulting recrudescence of the lamentable condition.

Conscientious observers in the field of otolaryngology can no longer doubt the occurrence of generalized argyria caused by intranasal silver medications, especially in view of the 100 per cent increase in such cases reported during a recent five years. A persistent indifferent attitude to this on the part of otolaryngologists might be condoned if it were possible through the use of such medications to achieve beneficial results for the patient which could not be achieved otherwise, but quite contrary is the case. Hilding, Proetz, Negus and others, through their commendable experimental studies, have brought enlightenment as to the physiology of the nasal mucous membranes, and they have proved the importance of normal ciliary action. The work of Lierle and Moore and of Proetz showed that mild protein silver affects the ciliary beat adversely. In addition, there is an immediate mechanical interference with the highly important streaming of the mucous blanket, caused by the clumping of the drug over the surface. Since the infectious process is beneath the epithelium, it is doubtful that any antiseptic value possessed by the colloidal solutions can compensate for their mechanical disadvantages. The same opinion was expressed by Walsh and Cannon as a result of their investigations, which further showed that neither neosilvol nor argyrol (10 per cent) had any bactericidal effect whatsoever on bronchiectatic pus after forty-four hours, despite the claims of the manufacturers.

"Simple Mastoidectomy, A Critical Analysis of One Hundred Consecutive Cases." Everett H. Tomb, M.D., Framingham, Mass. Archives of Otolaryngology, March, 1940.

The one hundred cases taken were those operated by the author in 1935 and 1936. The technic employed and the postoperative care given were the same in all cases. Numerous charts and tables are included in the report. There is a bibliography. This is a report that has entailed much thought and study. It is well worth one's time to read. The author's own summary is as follows:

Closure of the periosteum aided in the formation of new bone.

The use of noncompression bandages resulted in less postoperative edema of the tissues.

Mastoiditis was most frequent in those between 5 and 10 years of age. Many mothers of such children are believed to have been infected by them.

The frequency of mastoiditis was greatest in February and March and least in August, September and October.

Paracentesis was believed to be advisable.

The optimum time for operation was found to be about the third week of otitis media. Before that there is little localization, while after that, vital visceral structures are most frequently attacked.

In acute mastoiditis superimposed on chronic purulent otitis media, simple mastoidectomy with the removal of all eburnated bone was found to be sufficient.

In recurrent mastoiditis formation of new bone was not found in less than one year after the previous operation.

A revision mastoidectomy was indicated when sepsis with threatening symptoms was present or when faulty healing had occurred.

Cultures of material from the mastoid yielded in 54 per cent of cases a Str. haemolyticus and in 12 per cent a pneumococcus.

Streptococcic infection was associated with fulminating symptoms and numerous complicating lesions, while pneumococcic infection was practically symptomless but caused extensive destruction of bone.

"Chronic Progressive Deafness With Special Reference To Estrogenic Substances." Grant Selfridge, M.D., San Francisco. Annals of Otology, Rhinology and Laryngology, March, 1940.

This is a further discussion of this subject with a detailed report of six cases. Brown says: "The diencephalon has ties in three directions: with the cortex of the brain above; with the pituitary above; and with the sympathetic system." Low metabolic rate due to lack of protein is also a factor. Improvement of low tones can be accomplished by speeding up the metabolic processes with protein, thyroid, estrogen, etc. This article is a valuable resume of this difficult subject including many new ideas as to the cause and treatment of same. The author's own summary is as follows:

I. Estrogenic substances probably play an important role in conduction deafness. Estrogen relieves completely in many cases the tinnitus, menstrual irregularities, and other symptoms occurring during menstruation. Unfortunately, these symptoms recur in many instances when estrogen is discontinued.

2. There is definite evidence that thyroid is of importance and also the pituitary and adrenal cortex in treatment.

3. Thiamin chloride and nicotinic acid are exceedingly helpful as may be other factors of the B2 complex and other vitamins.

4. Neither nerve nor conduction deafness are caused by any single factor but appear to be linked with the various factors related to growth, i. e., endocrine glands, vitamins, mineral salts (the electrolytes) and amino-acids.

5. The evidence, slowly accumulating, points to nutritional deficiencies and the beginnings probably occur during the period of gestation and are due in the main to dietary errors and endocrine disturbances of the pregnant mother. The prevention of deafness, therefore, depends on the mother getting an optimum diet containing all the essential foods during the gestation period, and such dietary habits must be carried on during babyhood, childhood and adolescence.

6. Finally, further work is necessary concerning various factors referred to in this and other papers already published, and especially the nutritional, endocrine and allergic factors that may prove to be related to the enlargement of tonsils and adenoids.

PLASTIC SURGERY

Edited by George H. Kimball, M. D., F. A. C. S.
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"Reconstruction of a Hand and Four Fingers by Transplantation of the Middle Part of the Foot and Four Toes." Johannes F. S. Esser, M.D., Monaco and Pal Ranschburg, M.D., Budapest, Hungary. Annals of Surgery, April, 1940, P. 655.

This is a case of a Hungarian soldier who had a right hand mutilated by a hand grenade in 1917, so that only the thumb, which was rigid, and the root of the hand with a very small part of the metacarpals remained. In that year, all the scar was excised from the injured hand, the remaining metacarpals exposed and the extensor tendons liberated. The right foot was used for a pedicle graft and an incision was made from the web between the great and second toe, which curved proximally to the middle of the foot and then laterally to the lateral margin. The metatarsal bones were resected one inch distal to the skin incision; the extensor tendons, one inch proximal to this incision, leaving the tissues of the plantar surface to serve as a pedical. The pedical was then sutured on to the prepared stump of the hand, using a meticulous technique in approximating all tissues. After four weeks, half the pedicle was cut on the lateral side of the foot and the flexor tissues united. Five days later the remainder of the pedicle was severed and these tissues closed. The author reports that scar tissue penetrated deeply, but precautions were taken so that the junction of the tendons would not be directly under the skin wound.

The final result, twenty years post-operatively, is shown in a cut and has a remarkably esthetic appearance. The hand is perfectly capable of handling objects and is useful in normal occupations. The patient has been able to walk and carry on his normal occupation with the stump of the foot which remains.

The question of spontaneous union of dislocated nerves is discussed by Professor Ranschburg. A very detailed discussion of the sensory and motor responses of the reconstructed hand is given. Professor Ranschburg concludes: "In a word, the 'foot-hand' fulfilled all the ordinary functions of a normal hand, while walking on the remaining part of the right foot was in no way impeded."

Comment: This is a most unusual case of a reconstruction of a hand using a foot, together with the bone, tendon, and nerves. This reconstructed hand has served the patient usefully for twenty years and is a fine example of what meticulous operative technique can accomplish. There is also a fine study dealing with regeneration of nerves. The authors are certainly to be complimented on an unusual and satisfactory reconstruction of a hand which would have otherwise been a total loss.

"Double Elongations of Partially Cleft Palates and Elongations of Palates with Complete Clefts." James Barrett Brown, M.D., F.A.C.S., St. Louis, Surgery Gynecology and Obstetrics, April, 1940, P. 815.

Dr. Brown reviews the elongation of cleft palates and elongation of short palates which he first described in 1936. This is, in principle, the freeing of practically the entire soft tissue of the palate from the bony substance and setting this back to the posterior extremity of the bony plate. This lengthens the palate and mobilizes the soft palate. Observations made since the original publication are summarized:

(1) The author believes that a one stage operation is superior to a delayed flap technique since it prevents thickening of the palate.

(2) Preservation of the major palatine arteries is always possible and freeing is effected by carefully loosening the tissues around the arteries and gently stretching from the foramen. This method seems better than removal of the posterior wall of the major palatine foramen. If the arteries are cut, the delayed flap method of Dorrance should be used for the sake of safety; however, if these have been cut at a previous operation, the advantage of delayed flap has been gained and immediate set-back can be accomplished.

(3) This method of elongation does not interfere with the sphincteric action of the palate.

(4) Any method in which the posterior pillows are sutured behind the palate to gain length, causes a tight immobile scar with a "drumb-head" quality to the voice.

(5) If a slough of the soft palate from previous operations has occurred, then added to the elongation may be the freeing and suturing of available tissue.

(6) Any type of pharyngoplasty in which there is a reefing forward of the superior constrictor, as described by Wardhill, may be added to the push-back precedure but has not proved successful in the author's hands.

(7) Tooth buds may be damaged if the operation is done too early; therefore, the elongation may be delayed until the second year.

(8) The results of these procedures have shown increasing benefits to the patients, both in speech and in eating.

(9) Failures are to be expected in more difficult patients.

(10) No opening should be left in the anterior palate in order to avoid use of artificial dental obturators.

DOUBLE ELONGATION OF PARTIAL CLEFT PALATES

In some partial cleft palates there is only a narrow ledge of bone just inside the alveolus with corresponding lack of mucoperiosteum with which a closure might be effected. The author's technique in this procedure is to completely outline the available palate, as in the original push-back procedure, to set this tissue back to the posterior limits of the available bony plate. At the second operation, the original line of suture is reopened and the oral nasal leaves of tissue are separated, extreme care being used not to perforate the nasal mucosa. The arteries will have to be sacrificed at this stage. Closure of the cleft may be done at either stage or at a separate procedure. Although the arteries will have to be sacrificed at the second stage, it is not necessary to delay the flap unless a hole has been made into the nose.

ELONGATIONS OF PALATE WITH COMPLETE CLEFT

Following the finding that the nasal mucosa could be saved in double elongations and in palates with submucosa bony cleft, it has been determined that elonga-

tions may be made on complete cleft palates which previously have been repaired. The technique is similar to that described in the double elongation procedure except that more extreme care is needed to avoid perforations into the nose; likewise, as in the preceding procedure, if those perforations do occur, a delay should be used in completing the set-back. The arteries may be sacrificed if necessary and this usually does not require delaying the flap. More difficulties are to be expected in this procedure than in those cases which have a bony division between the nose and mouth cavities.

Comment: This is an excellent article presenting some original ideas, as well as a review of a procedure which is not old, but has established itself in the correction of congenital short palates. The procedure is technical and requires meticulous disection but offers a definite hope to the individual with a contracted soft palate, which is non-mobile and has not improved the quality of the voice. Emphasis is placed on the necessity for speech training following any procedure to improve a cleft palate.

CARDIOLOGY

Edited by F. Redding Hood, M. D.
1200 North Walker, Oklahoma City

"The Treatment of Coronary Artery Disease." A. C. Ernestene. Cleveland Clinic Quarterly, 6:253, 1939.

The principal manifestations of coronary artery disease are angina pectoris, coronary thrombosis (with myocardial infarction), cardiac asthma (paroxysmal cardiac dyspnea), Adams-Stokes syndrome and congestive myocardial failure. The clinical picture and the management of each of these differs from the others.

ANGINA PECTORIS

This term is applied to "paroxysmal attacks of substernal pain which characteristically are precipitated by exertion or excitement and are relieved promptly by rest." The pain is described variously as a sense of fullness, pressure, tightness or heaviness in the anterior chest. The distress compels cessation of all activity and often gives a feeling of impending death. The pain at times radiates to the neck, jaws and inner aspect of the arms. The symptoms are promptly relieved in most instances by glyceryl trinitrate and similar preparations, but death sometimes occurs instantly during an attack.

It is essential that the patient be impressed with the necessity of limiting his activity so that, as far as possible, the induction of attacks can be avoided. Attacks are precipitated more readily during cold weather, so the patient must be instructed not to walk rapidly against the wind or through snow. Removal to a warmer climate is advisable when financially possible. Overeating or excess exercise after a meal predisposes to an attack. More frequent smaller meals are at times advisable. Overweight patients should be placed on a reduction diet, coffee and tea only allowed in moderation and the use of tobacco reduced to the acceptable minimum. Constipation should be avoided to prevent straining at stool.

Preparations designed to increase the blood flow through the diseased coronary arteries should be given a short therapeutic trial, for an occasional patient is thereby permitted to increase his daily activities, but in general the clinical value of these preparations is doubtful.

The value of glyceryl trinitrate and amyl nitrate in the management of angina pectoris has been proved. The action of the former is more enduring, the drug is cheaper and less unpleasant to use. A fresh tablet is dissolved under the tongue or chewed before swallowing, a dose of 1/200 grain often being as effective as a larger amount. This drug may be used for prevention as well as for treatment of an attack, and patients whose occupations require effort that usually precipitates an attack may use as many as 12 to 20 tablets a day before undertaking the unavoidable exertion. Taken before or immediately after eating, attacks liable to follow a meal may be prevented. Nitroglycerine used in this way does no harm and permits the patient to get along comfortably for a long time, but its use does not excuse the patient from avoiding attack-provoking activities.

Sedatives may help patients who worry or in whom emotional upsets induce anginal attacks. Occasionally doses of 0.5 to 1.0 ounce of whiskey or brandy with each meal permits an appreciable increase in exercise tolerance. "Digitalis is employed only in the presence of such evidence of myocardial insufficiency as dyspnea or limited activity, passive congestion of the lungs, and edema of the lower extremities."

The injection of alcohol into the upper four thoracic sympathetic ganglia is the safest surgical procedure which has been advocated and is as effective as any other. Neuritis of the infiltrated intercostal nerves is a frequent complication but is rarely a source of great complaint. Alcohol injections should be used more widely, but should be limited to those patients in whom other treatments fail.

Beck and his associates have sought to establish new cardiac blood supply by grafting part of the pectoral muscle upon the myocardium. Distinctly encouraging results have been achieved, and further progress in this field is awaited.

CORONARY THROMBOSIS

This pain is more severe and lasts longer than that of angina pectoris. Shock usually develops early, is followed within 24 hours by fever, leukocytosis, and increased erythrocyte sedimentation rate. A pericardial friction rub develops early and may last for several days.

Treatment is first directed to the relief of pain. To this end the usual 0.25 grain of morphine may be doubled if necessary and 0.25 grain doses repeated every 30 minutes may be continued until the distress is abated. The patient is placed in bed as soon as possible, kept warm, and not disturbed by frequent examinations. Small amounts of fluids are offered when the patient is free from nausea and vomiting. Stimulants, as caffeine sodium benzoate, are used only when the systolic blood pressure falls below 80mm. The oxygen tent may be employed in the severe attacks accompanied by cyanosis and intense dyspnea.

After controlling the initial shock and pain, little medication is required. Doses of 0.2 gm. (3 grains) of quinidine sulfate may be given 2 or 3 times daily as a possible prophylaxis against development of ventricular paroxysmal tachycardia and ventricular fibrillation. Sedatives in small doses may be necessary to control restlessness. Digitalis is used only in congestive myocardial failure or in auricular fibrillation with a rapid ventricular rate. The simple diet should not exceed 800 to 1000 calories. Enemas are not used until after the second or third day.

Rest in bed should be absolute, the patient is not allowed to feed himself, or change his position for at least two weeks, and should be continued for from 6 to 8 weeks, until the erythrocyte sedimentation rate becomes stationary at or near the normal level. Thereafter the patient is allowed out of bed for gradually increasing lengths of time, but cannot return to his business activities for 3 to 12 months, depending upon the severity of the attack.

"The most important complications of coronary thrombosis are: (1) sudden death due to rupture of the ventricle or to ventricular fibrillation, (2) ventricular paroxysmal tachycardia, (3) congestive heart failure, and (4) embolic accidents. Sudden death and ventricular paroxysmal tachycardia occur most commonly during the first two weeks after the occlusion. Ventricular tachycardia may be a forerunner of ventricular fibrillation or it may be directly responsible for the development of congestive heart failure. Its onset calls for the administration of increased amounts of quinidine sulfate. Congestive myocardial failure is treated by the usual measures, including the use of digitalis. After

acute coronary thrombosis, a mural thrombus commonly forms on the endocardial surface of the infarcted myocardium. Embolic accidents, the result of dislodgment of portions of the thrombns, may occur at any time during the first 6 weeks after the attack, but are most common during the earlier part of this period. The emboli may lodge in any part of the pulmonary or systemic circulation and their treatment usually is limited to symptomatic measures.''

CARDIAC ASTHMA

This form of paroxysmal dyspnea is frequently caused by coronary artery disease. Morphine and the upright position are the two most important measures. The 0.25 grain dose of morphine hypodermically may be repeated if the patient is not improved within 20 minutes. When these measures fail, ''aminophylline may be given by intravenous injection in doses of 0.448 gm. diluted with physiological solution of sodium chloride or 50% dextrose solution and may result in prompt improvement. In the absence of anemia, venesection should be carried out with the removal of 250 cc. to 500 cc. of blood—an effect similar to that of venesection may be obtained by applying blood pressnre cnffs to the four extremities and inflating them to a pressure just above diastolic pressure. The administration of oxygen by means of a tent or by nasal catheter is also a measure of great value and should be instituted as promptly as possible.'' If acnte pulmonary edema develops in spite of these measures, give strophanthin or digitalis (if not used earlier) intravenously.

Cardiac asthma due to failure of the left ventricle should be treated as any other evidence of impaired myocardial reserve. Complete digitalization followed by daily maintenance doses are indicated, and after mild attacks this alone may snffice to prevent the recurrence of paroxysms. After more severe attacks, absolnte rest and strict limitation of activity thereafter are advised. Restriction of flnids and the use of dinretics may be helpful. The intravenous injection of 50 to 100 cc of 25 or 50 percent glucose solution daily for several days may help to diminish the freqnency of attacks. The patient should sleep well propped up in bed, and sedatives may be used to insure sonnd sleep.

HEART BLOCK

When these patients present evidence of reduced myocardial reserve—the usual condition—the cautious administration of digitalis is indicated, using electorcardiographic control, and discontinning the drug of the block increases. ''In favorable cases, suitable amounts of digatilis not only relieve the symptoms of myocardial insufficiency but may also rednce the degree of block or abolish it entirely.''

''The higher grades of heart block, and particnlarly complete auriculo-ventricnlar dissociation, may be complicated by Adams-Stokes attacks due to temporary standstill of the ventricles. The seiznres are characterized by dizziness, syncope or convulsions, depending upon the dnration of the ventricular systole. Adams-Stokes attacks are not common, but individuals in whom they occnr are liable to have repeated seizures. The actual attacks seldom call for treatment, and therapy is directed toward preventing their recnrrence. Occasionally, however, the standstill may be of such dnration as to necessitate the intracardiac injection of epinephrine and this procednre may be directly responsible for the saving of life. The most effective drngs for preventing recurrent attacks are epinephrine (0.5 to 1.0 cc. of the 1:000 solution) by intramuscular injection every 3 or 4 hours and ephedrine sulfate (gr. ⅜ or gr. ½) by mouth 3 or 4 times in 24 hours.

CONGESTIVE HEART FAILURE

Coronary artery disease often results in the gradual development of this condition instead of the forms just described. Treatment is absolute rest in bed, the proper administration of digitalis, sedatives, and diuretic drugs, restriction of fluid intake, and, less frequently, venesection and the mechanical removal of fluid from the thorax or abdomen.

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D., F. A. C. S.
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''The Restoration of Physiological and Anatomical Function In Old Ununited Intracapsular Fractures of the Neck of the Femur. Edward L. Compere, M.D., Chicago, Ill. John Lee, M.D., Los Angeles, Calif. Journal Bone and Joint Surgery, April, 1940, Vol. II, No. 2.

The authors wish to present a relatively new method of reconstruction in cases of old ununited fractures of the neck of the femnr. They point out the reconstruction in the past was pioneered by Royal Whitmau, later modified by Albee, Colonna and Campbell with additions from Brackett and Hendersou aud Joues. The Schanz osteotomy and Pntti osteotomy have also been used. The principles of these have been primarily that of the removal of the head of the femnr and snbstituting the trochanter or the neck in the acetablnm.

In the case of Brackett's the principle of the operation is to hollow the head of the femur and insert the reshaped neck to obtain a leverage from the abdnctors. In the anthors' present procedure two cortical tibial grafts are inserted across the fracture line and three or possibly four threaded pins slightly larger than a Kirschner wire are inserted into the neck of the femur and into the head. They have shown by actual tests of fresh specimens that the strength of these threaded wires is much greated than non-threaded and equals at least that of the Smith-Petersen nail, while the distracting force is considerably greater than the non threaded pins or nails.

Their technique is described, which consists of a Smith-Petersen approach and insertion of the graft and pins under carefully controlled technique. Following the operation no casts are applied. Patients are usually able to be up and on crntches in 18 days. Their primary point is the anatomical relationship they have established; the fact that the threaded pins do not endanger snrviving branches of nutrient arteries; the function is not complicated by painful knees or limitation of the hips because of the lack of casts.

''A Study of Acute Infectious Lesions of the Intervertebral Disks.'' Ralph K. Ghormley, M.D., William H. Bickel, M.D., Douglas D. Dickerson, M.D. Southern Medical Journal, April, 1940, Vol. XXXIII, No. 4.

The authors bring to attention the occurrence of a lesion of the spine involving principally the intervertebral disks which has a febrile onset as a rule, which denotes the possibility of a primary or secondary infectious process as the uuderlying canse. A few cases have been reported in the literature which the authors cite. The history of these cases vary both as to severity and the type of onset. Pain was the most common; first complaint was patient being severely ill, and others only mildly ill; backache was the common complaint. Fever was present in 16 of the 20 cases the authors reviewed. 13 of the 20 cases were ill to the point of prostration and had to remain in bed. The findings on examination of these patients revealed spasm of the lumbar or psoas mnscles as the most common single finding and tenderness of the affected region. Less commonly a list of the spine was noticed with loss of weight and irritation of the nervous system (central) as being a less common sign. An abscess was present in only one case, which appeared in an old nephroctomy scar. The most important single point is the x-ray which during the acnte stage is usually normal but later on, there is a reduction in the thickness of one of the intervertebral disks; this is followed later by increased thinning of the space and later on proliferation of new bone along the margin of the vertebra involved. The history of a previous infection starts with influenza,

pneumonia peri-appendicitis, pyelitis, postpartum infection, perinephretic abscess and erysipelas were noted in several of these cases. Thus it is felt that this is a metastatic infection. These cases must be differentiated from a true osteomyelitis of the spine with abscess formation. Later with tuberculosis, typhoid spine, brucella abortus infection, lesions of the disk secondary to trauma, congenital absence of the disk and various forms of a malignant disease. Prognosis of the condition is excellent as a rule. Treatment is dependent on the severity of the disease. The treatment is systematic with rest in bed for relief of pain. Probably the most valuable point is that of a plaster of paris body cast with the spine in mild hyperextension. Fixation should be for two or three months.

ABSTRACTED BY: HOWARD B. SHORBE, M.D.
SUBMITTED BY: EARL D. McBRIDE, M. D.

UROLOGY

Edited by D. W. Branham, M. D.
502 Medical Arts Building, Oklahoma City

"Urological Manifestations of Appendicitis. Charles D. Ehlert. Journal of Urology, March 1940.

Recently the author was stimulated to study and review the various subjective and objective manifestations of appendicitis that might be confused with those arising as a result of lesions within the urogenital tract, in particular those confined to the urinary tract.

A thorough search of the literature revealed a surprising scarcity of material pertaining to urogenital symptoms occurring in appendicitis. Hematuria, dysuria, disorders of urination ars signs and symptoms occasionally mentioned but yet the mechanism of the production of these findings are poorly understood.

The authors review briefly the anatomical findings existing between the appendix and the urinary tract, noting that its position is extremely variable and can normally be in quite intimate relationship with the ureter, bladder, the lumbar sympathetic chain, right spermatic artery and the genitocrural nerve. He discussed the various urologic manifestations from a classified table, observing that they may take the form of disorders of urination, abnormalities of the urine, pain in the kidney ureter or right testicle. The intimate association of a diseased appendix to the above named structures rationally explain the urologic symptoms and signs often observed in instances of appendicitis.

The Present Status of Transurethral Resectionists, Competent and Otherwise. Frederick E. B. Foley. The Journal of Urology, April, 1940.

Prostatic resection is not now and never can be the subject to general appraisal of its status. Only surgical procedures that require no particular skill, ability or experience can be subject to such appraisal. The only factor that properly determines such appraisal is the clinical soundness of a surgical procedure when properly performed. Beyond this the evaluation of any surgical procedure becomes an appraisal of the skill, ability and experience of the operator. Dr. Foley specifically states that the title of his thesis is not the present status of the operation, prostatic resection, but of the individual who performs the operation, the resectionist.

His experience shows that great competence of the resectionist makes prostatic resection a valuable procedure to be used extensively, and limited competence makes the operation of limited clinical value and restricted use. For the completely incompetent operator it is never the operation of choice.

He cites the qualifications for a competent resectionist as an individual who first must have a liking for the operation as well as a broad experience in cystoscopic work, and of extreme importance a considerable experience in resection itself. He believes it is doubtful that in any other surgical procedure is there a greater premium on experience.

Comment: Every surgeon and particularly every urologist should realize the truth of the statements made in this article. Too long have we evaluated technical surgical procedures from the results obtained by the individual operator, and as long as we do so certain operations that demand skill, ability and experience will show an unfavorable balance.

It is refreshing to read such an article as Dr. Foley has written, for he has gone to the crux of a controversial subject. No operative procedure can be appraised unless the surgeons responsible for such operations are of the same skill, ability and experience. Resection of the prostate particularly, has suffered in this regard.

One can sum up that so far as resection of the prostate is concerned the skillful operator obtains good results and praises the operation, while the incompetent man's efforts are followed by failure and therefore he condemns its use.

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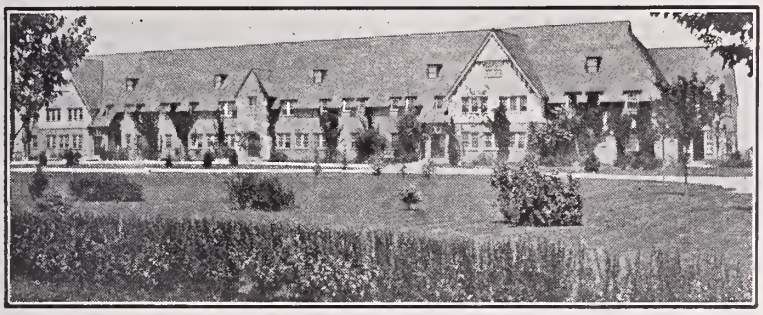
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VOLUME XXXIII OKLAHOMA CITY, OKLAHOMA, JULY, 1940 NUMBER 7

Aminophyllin, Its Uses and Its Effect on the Electrocardiogram*

ALPHONSE MCMAHON, M.D.,
St. Louis, Mo.
AND
ROBERT A. NUSSBAUM, M.D.,
St. Louis, Mo.

Aminophyllin, a combination of ethylene diamine with theophylline was introduced to the medical profession by Dessauer[1] in 1908 under the name of Euphyllin. It has since then been known as metaphyllin, theophylldine and more recently as aminophyllin. This drug is one of several combinations of theophylline. These combinations are loose chemical mixtures that break down in the stomach to release free purine and the substance that has been used to increase solubility. The ethylene diamine fraction of aminophyllin increases its solubility in water to forty percent. The theophylline content varies between 78 and 83 percent. The solubility of the drug determines its availability for use by routes of administration other than the oral route.

For years previous to the introduction of aminophyllin various combinations of theobromine and theophylline had been used in the treatment of arterial diseases. Their low solubility however, limited their field of usefulness. Aminophyllin being more soluble than any of the other combinations of theophylline was immediately used in treatment by the intramuscular and intravenous routes of administration.

The therapeutic effectiveness of aminophyllin, as with other combinations of theophylline, depends to a large extent upon the amount of theophylline present, while the mode of administration of the drug and its rapidity of action depends upon the solubility. Upon the theophylline contents of the drug will also depend the gastric symptoms arising from excessive doses or when used in individuals sensitive to the theophylline preparations.

The untoward symptoms occurring in those intolerant to aminophyllin are referable to (1) The gastro-intestinal system, with such symptoms as gastric distention, nausea and vomiting and a burning epigastric or substernal pain; (2) The head, with headache, throbbing in character or a general fullness; vertigo or lightheadedness; (3) The nervous system, with subjective nervousness, a heightened degree of sensibility and at times a tremor; (4) The heart, with cardiac palpitation and precordial pain or oppression.

The routes of administration followed in the use of aminophyllin are, (1) oral—the drug being given in capsules or tablets in a dose that is variable and dependent upon the severity of the symptoms present. The average dose is 9 to 15 grains a day. (2) Rectal—as suppositories or in a solution of glucose; the average dose by this method is 7½ grains. (3) Intramuscular injection—in a dose of 3¾ grains (0.25 gm.) to 7½ grains (0.48 gm.) (4) Intravenous injections—the drug being given in distilled water, saline and hypertonic glucose solutions, in a dose of 3¾ grains (0.24 gm.) to 7½ injection.

Aminophyllin may be used as a diuretic in cardiac, renal and hepatic insufficiencies. It is of particular value when used in the oedema of congestive heart failure. When taken by mouth it is less effective in producing diuresis than theophylline or other combinations of theophylline. However,

*Presented at the General Scientific Session, Annual Meeting, Oklahoma State Medical Association, May 7, 1940, in Tulsa.

when used intravenously it is of equal value and in some cases it is more effective than theophylline. The diuretic effect is produced by direct cellular action on the kidneys, by vasodilatation of the renal vessels with consequent increase in the blood supply, by the stimulation of the flow of water and chlorides in the tissues to the blood stream, and by a very slight depression of tubular reabsorption.

The diuretic effect of aminophyllin is increased when it is given simultaneously with a mercurial diuretic such as salyrgan. Several combinations of a xanthine with a mercurial have been in clinical use for some years. The most effective and least toxic preparations are those of mercurpurin and salyrgantheophylline. It is our opinion however, and this seems to be confirmed by such investigators as Hermann,[2] that when a salyrgan and aminophyllin are given simultaneously, they are more effective than either of the above two xanthine mercurial preparations.

The simultaneous use of aminophyllin and salyrgan permits the reduction in the dose of salyrgan. It has been found that when salyrgan is given with aminophyllin it is less irritating and toxic. This is probably due to the increased rate of absorption of the mercurial from the site of injection. In one hour, ninety-seven percent of the drug has disappeared from the muscle site. The combination is more effective in removing oedema because of its double effect, renal cellular stimulation and tubular depression.

Aminophyllin when combined with hypertonic glucose solution in congestive heart failure produces a marked increase in diuresis. This increase is more pronounced than with either alone. Its simultaneous use with digitalis in the above clinical condition produces a more rapid reduction of the oedema, with increased diuresis occurring as a result of the direct renal stimulation plus the secondary effect on the myocardium.

Other conditions benefited by the use of aminophyllin are as follows: eclampsia, postoperative anuria and the oleigurias of grippe, pneumonia, diphtheria, scarlet fever, tetanus, mercurial intoxication and the coma of barbiturates.

This drug may also serve effectively as a respiratory stimulant in the abnormalities of respiration associated with congestive heart failure. These abnormalities are (1) simple dyspnoea, (2) paroxysmal nocturnal dyspnoea or cardiac asthma (3) Cheyne-Stokes respiration.

The simple dyspnoea associated with hypertensive and arteriosclerotic heart disease is manifested in the early stages by the inability of the patient to exercise moderately without discomfort and in the later stages by orthopnea. It may be distinctly benefited by the oral use of aminophyllin when used early in the disease and continued for long periods of time. The drug is less effective in heart disease of other types.

In paroxysmal nocturnal dyspnoea or cardiac asthma which is a manifestation of acute left ventricular failure, distressing episodes of breathlessness are benefited or completely relieved by the intravenous use of aminophyllin at bedtime, in doses of 0.24 gm. to 0.48 gm. The latter dose is used in the more severe cases. It may be continued twice daily, in the same dose, in those cases not responding to a single injection at bedtime.

The third type of respiratory abnormality occurring in congestive heart failures is Cheyne-Stokes respiration or the periodic breathing or heart disease. It is usually associated with cardiac failure of hypertensive and arteriosclerotic origin. It may, however, occur in uremia and with drug poisoning. Its appearance is likewise an indication of a left ventricular failure. The attacks may be continuous day or night, or they may be paroxysmal with short or long intervals of freedom. They occur more frequently at night, the patient usually awakening during the apnoeic interval. This is more apt to be the case when the apnoeic interval is markedly prolonged. The hypernoeic interval following the awaking is expressed symptomatically by marked efforts at breathing and is accompanied most commonly by a pronounced sleep-disturbing fear.

Vogl[3] in 1927 was the first to call attention to the intravenous use of aminophyllin in this abnormality of respiration. In 1932, reporting on five years of consecutive use of the drug, he stated that he had never failed to restore the respiration to normal.

The inadequate symptom complex often presented to the physician by the patient who suffers from Cheyne-Stokes respiration or from paroxysmal nocturnal dyspnoea increases the diagnostic difficulty. As a consequence, the case may remain undiagnosed for some time. This is particularly true when normal respiration is restored shortly after the patient awakens. When doubt exists as to the nature of the respiratory complaint, aminophyllin may be used as a test in a suppository or in a glucose solution administered by rectum at bedtime. The dose for this purpose is 0.48 gm. If this dose is effective in relieving or controlling the nocturnal attacks the drug may then be continued in this manner or it may be given intravenously. If a single intravenous dose given at bedtime fails to control the attack, an additional similar dose may be given during the day until the attacks have ceased. With cessation of

the attacks the drug should be administered by mouth over a long period of time.

In order to avoid unpleasant reactions such as headache, faintness and dizziness, syncope, or a marked increase in respiratory rate, such as may occur if the drug is given during a period of hyperpnoea, it is well to administer the dose slowly, over a period of three to five minutes in twenty cc. of saline or glucose.

Another mode of intravenous administration[4] that has proved to be effective consists in dissolving the total dose of 0.48 gm. of aminophyllin in 2 cc. of distilled water. This total dose is given in four divided doses of 0.5 cc. each, administered at the decrease of the respiratory movement. In this manner it is possible to avoid respiratory stimulation which may occur when the drug is given during the hyperpnoeic interval. The drug may also be given by mouth during the attack in a 0.5 gm. tablet.

It is impossible, due to the present limit of time, to discuss in any detail the mechanism of the respiratory abnormalities in congestive heart failure. The theories suggested are briefly as follows: (1) The orthopnea is due to changes in vital capacity and lung volume;[5] (2) the orthopnea is due to an increased cerebral venous pressure with the slowing of the intracranial blood flow and an anoxemia of the respiratory center;[6] (3) orthopnea and other respiratory abnormalities of congestive heart failure are due to an increased cerebral spinal fluid pressure and venous pressures.[7-8-9] The following facts are used as evidence for this last theory—(1) both pressures fall with the return of compensation; (2) there is a reduction of pressure in the sitting posture; (3) the relief of symptoms may be secured by spinal drainage.

The effectiveness of aminophyllin when used in respiratory abnormalities is based upon its ability to produce a prompt reduction of both intrathecal and venous pressures. Coinciding with this reduction, dyspnoea is relieved and Cheyne-Stokes respiration is returned to a normal rhythm. The reduction of the cerebral spinal fluid and venous pressures with improvement in the cerebral circulation is the result of improved myocardial tone. It may be well to note here that some observers[4] claim that the improvement in respiration is due to the direct stimulating effect on the respiratory center of the ethylene diamine fraction of the drug. The same observers have noted, however, that the compound may be more effective in cases in which the ethylene diamine fraction failed to act.

Aminophyllin may be of benefit in respiratory abnormalities other than those associated with congestive heart failure. The following conditions may be benefited by its use: (1) the dyspnoea of the obese; (2) the dyspnoea of pulmonary tuberculosis; (3) narcotic accidents with respiratory cardiac collapse; (4) toxic coma; (5) general intoxication; (6) central respiratory difficulty as in the pneumonia of infants; (7) chronic bronchial asthma.

In chronic bronchial asthma, Hermann[10] has shown that status asthmaticus, with reduced adrenalin sensitivity, may be definitely relieved by the intravenous use of this drug. He has reported in his study that some cases show a return of adrenalin sensitivity following its use.

Aminophyllin has been used as a vasodilator in the treatment of coronary artery disease, coronary thrombosis and the anginal syndrome. The literature on this use of the drug in these conditions indicates a difference of opinion among authors as to the value of this drug in relieving the symptoms for which it is used in treatment. The clinical value of aminophyllin should be based upon its effectiveness in dilating the coronary vessels and thus secondarily improving myocardial tone and function.

It has been conclusively demonstrated by perfusion experiments in animals[11-12] that the perfusion rate is increased following the addition of theophylline ethylene diamine to the perfusion fluid. In some cases the rate of flow is increased by the drug to 80 percent. These experiments may serve as a basis for the clinical use of this drug in coronary artery disease.

Clinical reports following its use in the anginal syndrome confirm these experimental conclusions.[13-14-15-16-17-18] These reports on the effectiveness of the drug in the anginal syndrome were based upon the reduction of the intensity or the complete control of the pain in the exercise tolerance test. Several observers [19-20-21] contrary to the above favorable results have reported completely negative results following the use of aminophyllin in the anginal syndrome.

The usefulness of the drug in coronary thrombosis, with infarct of the myocardium, depends upon its ability to produce dilation of the collateral circulation of the infarct with a consequent increase in the rate of healing of the infarct. The evidence for this effect on the collateral circulation following infarct was presented by Fowler[22] in 1925. He showed that the intravenous use of aminophyllin, following the artificial occlusion of the coronary arteries of dogs, resulted in an improvement of the color of the infarct within two minutes, an increased rate of healing and reduction in size of the healed infarct. Other observers [23-24] using different

bases for the effectiveness of the drug or using the drug by some other route than intravenously have failed to confirm Fowler's results.

We believe that the experimental and clinical evidence offers a reasonable basis for the use of aminophyllin in diseases of the coronary arteries, with or without anginal pain, and in coronary thrombosis. In the anginal syndrome, the drug may be used orally in doses of 9 to 15 grains daily. The intravenous administration may be employed when attacks are severe, persistent, or frequently recurring. It is well to alternate the drug with other combinations of theophylline when tolerance begins to appear. Alternation of these compounds may likewise prevent the development of disturbing gastric symptoms.

In coronary thrombosis, aminophyllin is used intravenously at the time of the attack, in a dose of 0.48 gm. It may then be given intravenously twice a day until the acute symptoms have ceased. This may necessitate its use in this manner for 8 to 10 days and following this, one intravenous dose may be given at bedtime for a brief interval, or until respiratory abnormalities have disappeared. During these latter intervals the concurrent use of the drug by oral administration is recommended.

We have noted in some cases of coronary thrombosis a complete relief of the pain after intravenous aminophyllin. The dose of the narcotic used to relieve the pain of the acute attack may be reduced and, in some cases, completely discontinued when aminophyllin is used. Many patients have stated that the weakness and extreme fatigue accompanying the attack is less pronounced and that a feeling of well-being is produced. We do not advocate, however, that this drug should be used to the exclusion of other valuable therapeutic procedures in the treatment of these severe cardiac accidents. The drug is at best only an adjuvant in a complex therapeutic regime. It should be used cautiously and should be discontinued with the occurrence of untoward symptoms or severe reactions. We have never observed any fatality following the administration of this drug.

The effect of Aminophyllin on the Electrocardiogram: The difference of opinion existing in the literature regarding the effective dilating action of aminophyllin on the coronary arteries led us to a study of the effect of this drug on the electrocardiograms of cases of known heart disease or evident arteriosclerosis. It was our hope that evidence might be adduced from changes in the electrocardiogram that would prove to be of some value in solving this unsettled question.

The literature is notably lacking in experimental work on the human subject. In the electrocardiographic studies on animals subjected to artificial coronary occlusion little change was noted in the electrocardiogram following the intravenous administration of aminophyllin subsequent to the induced occlusion. The literature shows a striking lack of studies on the effect of the drug on the electrocardiogram of human subjects. One clinical investigator Falk using the drug intravenously in coronary thrombosis has reported a definite change in the electrocardiogram. The altered waves tend to return to a more normal appearance.

This study was conducted at the St. Louis County Hospital, the material for study being selected from the general wards of this hospital. The procedure followed consisted of taking three standard Leads and One Chest Lead before the test was started. Aminophyllin was then given intravenously in a dose of 0.48 gm. The introduction was slow in order to avoid a reaction but in spite of this, several patients complained of dyspnoea, flushing of the face, fullness in the head, anxiety, nervousness, faintness or palpitation. Loss of consciousness with vomiting occurred in two cases. These cases were both women, classified as "neurotic." Emotional instability undoubtedly contributes to the severity of the reaction following the introduction of the drug. Subsequent electrocardiograms were taken during the injection and at fairly constant intervals of three, five, ten and twenty minutes and in some cases thirty minutes. A few of these electrocardiograms showing the most pronounced changes are presented together with some of the salient facts of the patients' histories and physical findings.

DISCUSSION

It can be easily seen from the electrocardiograms presented, that changes occur in the electrocardiograms of cases of known heart disease of arteriosclerotic and hypertensive origins when aminophyllin is injected intravenously. It seems hopeless at this time to attempt to correlate these changes or to classify them in relation to specific factors.

The increase in heart rate seen fairly constantly in these tracings is most probably due to the fall in blood pressure with the consequent compensatory tachycardia. The emotional state and the subjective response of the patient to the drug plays no small part in the occurrence of a rapid heart rate. The tachycardia had little, if any, direct relation to alterations of the pace-maker or the intrinsic conduction mechanism of the heart.

The electrocardiogram is but a pictorial record of the electrical changes in the heart muscle during systole and diastole and represent the fluctuation in electrical potential

during each cardiac cycle. From the contracting healthy myocardium, a certain complex configuration is recorded with the electrocardiograph. If anything happens to disturb the electrical conductivity or electrical continuity of that heart muscle there result changes in the tracing obtained.

It is assumed, therefore, that the changes recorded above are the results of variations in the myocardial conductivity. These changes are transient and occur very rapidly after the drug is administered. Since aminophyllin causes vascular dilation elsewhere in the body and since the stated character of the electrocardiographic response may be assumed to be due to alterations in blood flow, it may be further assumed that changes in the coronary circulation are responsible for alterations of the electrocardiograms subsequent to the injection of aminophyllin.

If such reasoning is sound, then it might further be assumed that those cardiac cases in which the electrocardiograms remained unchanged following the administration of the drug were cases with myocardial damages too advanced to be altered; with coronary arteries too sclerotic to be dilated; or with a collateral circulation inadequate to effect the nutritional state of the muscle.

It is hoped that further investigation will be stimulated by such assumptions, since many possibilities are suggested. A larger series of such cases with a positive response to the drug may indicate some prognostic value in the use of aminophyllin. Changes in the above tracings may then be sufficient evidence for a coronary circulation capable of alternations and therefore amenable to therapy.

SUMMARY AND CONCLUSIONS

1. Aminophyllin is of value in producing diuresis in congestive heart failure and when administered concurrently with salyrgan enhances the effect of the latter drug.

2. Respiratory abnormalities due to congestive heart failure are relieved or returned to a normal status by aminophyllin administered by oral or intravenous routes. The latter method is more effective in the acute attacks.

3. Perfusion experiments demonstrate that coronary artery blood flow is increased by aminophyllin. The results of clinical and experimental studies are at variance as to the value of this drug in coronary occlusion and the relief of the pain of the anginal syndrome. The consensus of clinical experience favors its use in these conditions.

4. Electrocardiograms were studies in thirty-eight cases to determine changes induced by aminophyllin when administered intravenously in doses of 0.48 gm. Thirty-five of these cases had a true heart disease with or without an anginal syndrome. Three cases had no obvious cardiac disease.

5. Twenty-six electrocardiograms showed changes following the injection of aminophyllin. In twelve cases there was no apparent change.

6. There was no regularity in the alternations of the tracings that could be related to the clinical diagnosis, the degree of myocardial damage, the age, the blood pressure or to other factors.

7. The changes occurring in the electrocardiograms were concerned chiefly with the T waves of one or all Leads. An adequate explanation of these changes cannot be as yet offered.

8. A plausible explanation of the changes is based upon the possible increase in the blood flow to the myocardium through the dilation of coronary vessels with the consequent alteration of the electrical conductivity of the heart muscles.

9. Studies on this subject should be continued to determine if possible the prognostic significance of these alterations in the electrocardiogram.

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"Assmann's Foci"—Infraclavicular Infiltration

A Form of Early Pulmonary Tuberculosis In Adults*

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The prevailing conception of the origin of pulmonary tuberculosis has been greatly revised, since Assmann published his first observations in 1921 on infraclavicular infiltrations, which he believed to represent the early stages of pulmonary tuberculosis in young adults.

According to Assman's original description, the lesion consists of an isolated, round focus of varying density, usually situated just below the clavicle, in the lateral part of the lung field, more rarely in the lower portion of the upper lobe. This focus is usually sharply circumscribed, and definitely contrasted, but it may be of only slightly increased density, and merge gradually with the normal surrounding pulmonary parenchyma. Assmann stressed, as particularly significant, the fact, that in contradiction to the generally accepted idea, that tuberculosis of the lungs nearly always begins in the apices, the infraclavicular focus is associated with absolutely normal apices.

Fluroscopy must be considered an integral part of the roentgen-examination, if this lesion is to be detected in all cases, in which it is present.

An infraclavicular infiltration—"Assmann focus"—may easily be hidden by the shadows of the scapula and the thoracic muscles. It is therefore necessary to examine the patient in all aspects, including the oblique views and dorsoventral and ventrodorsal positions.

In lateral views the Assmann focus is usually situated in the median posterior portion of the upper lobe. It lies, as a rule, in the neighborhood of the lateral and dorsal bronchial ramifications of the posterior bronchus of the upper lobe.

The central location of the focus, is responsible for very few or no physical signs. Only occasionally is it possible to elicit a change in the respiratory sound or fine rales in the interscapular region posteriorly, and rarely may these signs be elicited over the infraclavicular region anteriorly.

The general clinical signs are often very insignificant. There is sometimes a slight rise in temperature, but usually it is weakness and general malaise, which attracts the first attention. Unless a careful examination is made, the symptoms are generally attributed to an influenza. Sometimes a small hemoptysis in an apparently healthy individual is the first symptom of the disease. There may be slight pain in the chest, probably due to an associated local pleurisy. This is indicated less by direct symptoms, than by the fact, that after pneumothorax adhesions are often found in these areas below the clavicle, the apices being entirely free. In presence of sputum, tubercle bacilli are frequently found.

Assmann looked upon the infraclavicular infiltration as tuberculous pneumonitis, i. e. an exudative process. This leads often to caseation and central necrosis. A central cavity is then usually observed within the Assmann focus.

Assmann also pointed out, that even in early cases there can already be found many evenly arranged, small foci around the primary lesion. He considered them to be small nodules originating from deposits of tubercle bacilli carried by the blood vessels and lymphatics. In further progressing cases there may be seen a continuous extension from the main shadow of the focus, and sometimes the appearance of similar isolated, round foci in other portions of the lung field, which are considered as aspiration metastses. This is the usual way in which

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a pulmonary phthisis may develop from the Assmann focus. Assmann made it clear, however, that he did not consider the early infiltration as the original lesion from which pulmonary phthisis develops in all cases.

It should also be remembered, that even in those cases in which these foci are the first apparent signs of pulmonary tuberculosis, they are not the true primary foci according to Ranke. They indicate a reinfection, such as may occur in a subject not entirely free from tuberculosis, yet one practically healthy. This reinfection may be either of exogenous or endogenic origin.

The prognosis in cases of infraclavicular foci is usually favorable. In neglected cases a disseminated fibro-caseous tuberculosis may develop.

In the first instance, a considerable resolution toward normal radiographic appearance may be observed. The shadow of such a focus may decrease in size, even the central cavities may shrink and finally disappear completely. This healing takes place partly through resorption of the exudative pneumonic process, and partly through fibrosis with subsequent retraction of the scar. Calcification of these foci may also occur.

If the process shows no tendency to retrogression, it may extend into the surrounding parenchyma; the cavities increase in size, aspiratory metastases appear, and we then are faced with a fully developed pulmonary phthisis.

The practical importance of recognition of the pathological substrate of the infraclavicular infiltration, lies in the fact, that by instituting an early treatment, the latter course may be prevented, and a complete recovery may be expected in the majority of cases.

Assmann's observations were also of great theoretical significance. In developing Assmann's thesis, Redeker in 1926 gave an elaborate description of the infraclavicular infiltrations, their development, relation to the tuberculosis of puberty and phtiseogenesis.

Redeker summarized his studies in the following conclusions:

1. The early infiltration is localized in the lateral infraclavicular region or in the middle lung field.
2. The infiltration is first detected on roentgen-examinations and not by percussion or auscultation.
3. Frequently enlarged nodes with perifocal inflammation are found.
4. There are no subjective complaints or objective signs, i. e. no cough, chest pains, or toxic symptoms. The initial stages of infraclavicular infiltration are therefore never recognized on physical examination, but are usually detected in tuberculous dispensaries on regular examinations of exposed, but not morbid individuals.

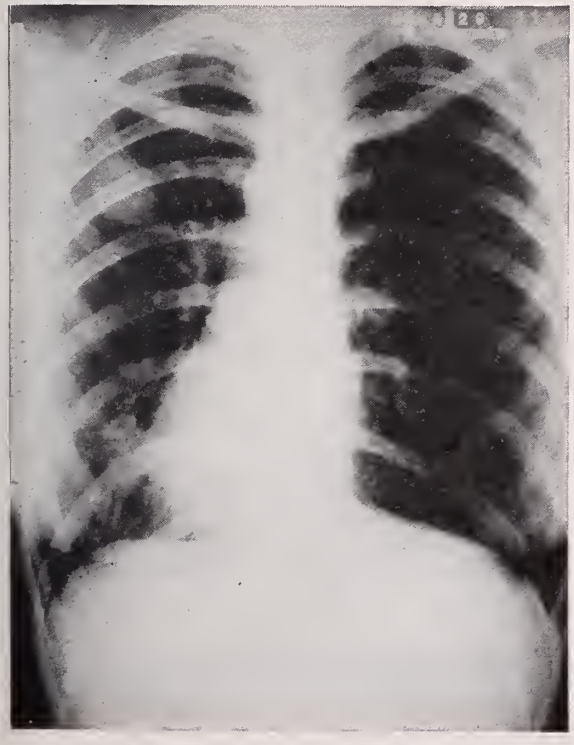


Fig. 1. Typical Assmann Focus in the left infraclavicular region.

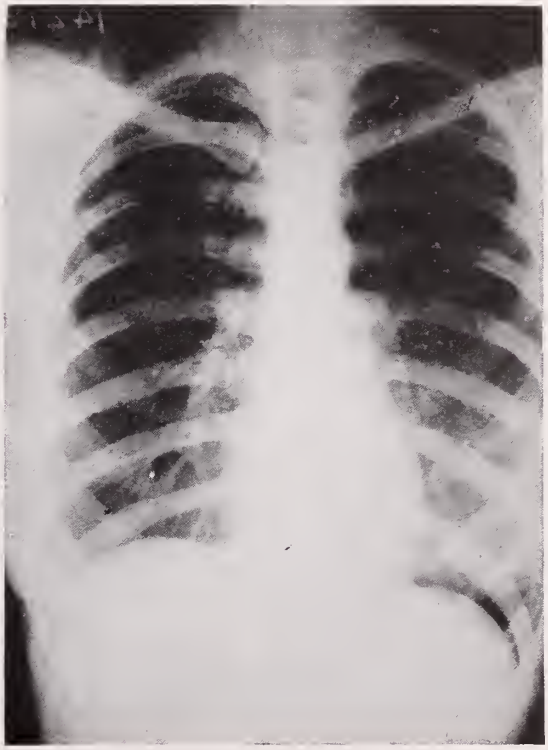


Fig. 2. Focus decreased in size after some resorption.

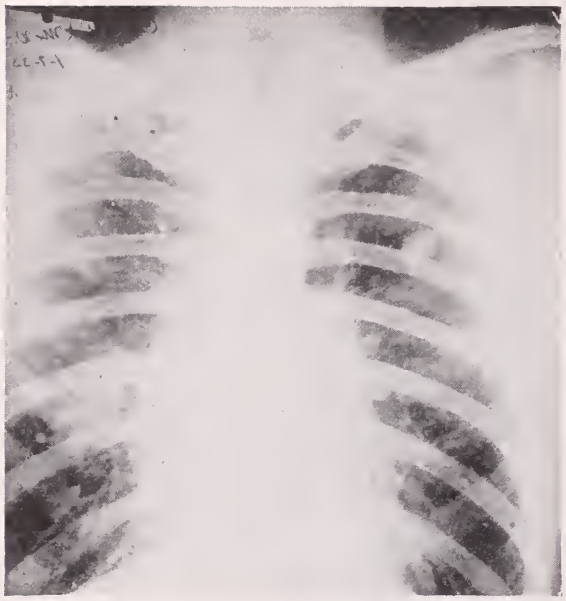


Fig. 3. Assmann Focus in the left infraclavicular region with central calcification.

5. The infraclavicular infiltration — "Assmann's focus"—develops predominantly in young individuals, between fifteen and twenty years of age, also in the next quintennium, only rarely later.

6. Very frequently an acute source of infection can be discovered.

The studies of the clinical course of infraclavicular infiltrations showed some cases to terminate in absorption of the infiltration or in subsequent fibrosis. In other cases, the infiltration increased in size and this was accompanied by elevation of temperature, general toxic manifestations, and occasionally hemoptysis. Roentgenograms of the chest invariably revealed central caseation and formation of a cavity. Sometimes fibrosis ensued, but more frequently the infection involved the surrounding parenchyma. The new foci were round, soft, and ill-defined. Redeker interpreted these new round foci as a perifocal reaction around a new small microscopic focus. It was the surprising ability of complete resorption of these metastatic foci, that caused him to assume this explanation.

After a bronchogenic spread, the infraclavicular infiltration does not present a round shape. The whole upper lung field is veiled. In absence of a cavity the origin from a typical localized infiltration cannot be recognized, unless it was noticed previously.

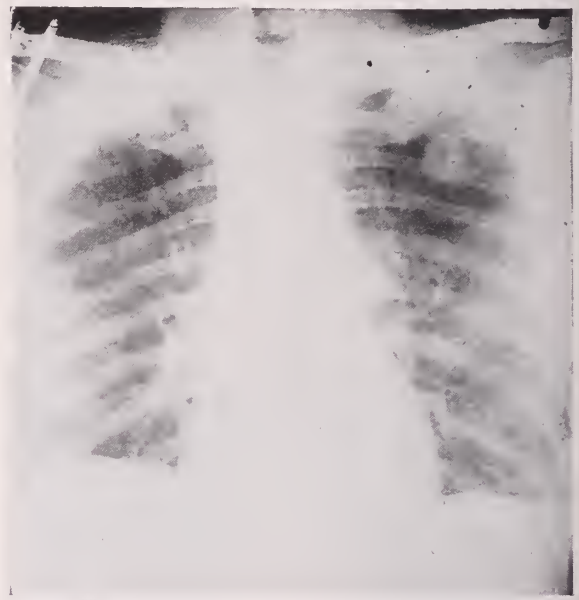


Fig. 4. Assmann Focus in the left infraclavicular region with a central cavity.



Fig. 5. Disseminated bilateral tuberculosis in the same case which showed originally an infraclavicular infiltration with a small cavity.

Perifocal inflammation is largely responsible for the diffuse veiling in this stage. After it subsides and induration of the larger metastases occurs, the original focus is plainly visible. In many cases a restitution of the metastases does not take place, and a caseation and necrosis of the confluent foci progresses. Clinically these patients present a caseopneumonic form of tuberculosis, phthisis gallopans. The infraclavicular cavity increases rapidly and becomes the dominant feature of the pulmonary phthisis. A rapid transition into a metastatic, exudative, caseopneumonic form is however rare. More frequently an isolated cavity develops, without morbid subjective symptoms, and ultimately the process becomes stationary. If an

acute recrudescence occurs, a sudden hemoptysis may be the warning signal or the spread may only show an increase of the size of the cavity. In some cases the cavity may shrink, and leave a fibrosis.

Redeker is of the opinion that the infraclavicular infiltration is the most frequent origin of the acute and chronic phthisis of adults. As regards the relations of the apical foci to the infraclavicular infiltration, Redeker calls attention to his repeated observations, that a typical productive or productive cirrhotic apical tuberculosis develops from an infraclavicular infiltration followed by an aspirative dissemination into the mid field and hilus. With further progress the caudal foci are resolved and the apical changes remain manifest in the roentgenograms.

In conclusion may we say, that in view of these investigations of the pathological substrate and clinical course of the "Assmann foci," they deserve proper attention of the clinician and roentgenologist. If early diagnosed and adequately treated, the prognosis is usually good. The failure to recognize an Assmann focus as a tuberculous manifestation, and to institute the proper treatment may lead to dissemination of the tuberculous process, which cannot be controlled by our present therapeutic measures.

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Relationship of Spina Bifida Occulta To Back Injury*

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Since the advent of the X-ray and the taking of X-ray pictures of the lumbar vertebra, it has been obvious that there is a wide variance in the formation of the bony structure of this area. Various anomalies have been found and very adequately and definitely described. Heise in his article "Anomalies in the Lumbar Spinal Column" classified these various conditions as spina bifida of the sacrum, sacralization, lumbar ribs, and scoliosis. He found that in a series of 1,050 cases studied that 240 of these had spina bifida of the sacrum, or 22.58 per cent. He described this anamolous condition as a triangular defect, having its base superior toward the fourth lumbar vertebra; quite frequently the two halves of the arch of the first sacral vertebra are not completely united with each other. There are found various transitions and forms of spina bifida occulta; quite frequently a spina bifida occulta may be found where in the cleft an isolated spinous process can be recognized, which seems to float freely, actually, however, being united with the remaining skeletal tissues by cartilage or connective tissue. Other authors agree in the classification of this condition and the description of the anomaly. However, they vary considerably in the per cent found. It is not primarily the purpose of this article to establish the per cent of spina bifida occulta found, or to prove or disprove the findings of these men.

An honest effort has been made to collect data showing a definite relationship between the anomalies of the lumbo-sacral area of the back commonly called malformation of the lamina of the fifth lumbar vertebra and sacrum, and the susceptibility of the individual to injury in this area. In order to carry out this experiment, a large group of lead and zinc miners were examined, and their spines X-rayed. A diagnosis from the roentengraph was made, and these individuals were allowed to work for a period of five years. During this time a case record was kept of each accident sustained by this group of men, the amount of time lost by each, and the resulting disabilities ascertained.

The experimental group used belonged to

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a laboring class of whom a great per cent make their living by hard physical labor. It was necessary for them to work carrying heavy loads, and shovel heavy rocks. They were all under-ground workers, and all men worked under similar conditions, but at different mines. All the injuries were treated by two men, Dr. Richard Russell and myself.

In determining the type of injuries that should be included in this survey, I decided that only those accidents that had no direct trauma would be used. All cases of fracture caused by direct blow to the back, or other direct contusions were eliminated. Only those cases in which the patient complained of having pain in his back during the time that he worked, or immediately following, and in those patients in which they either slipped or fell causing catching pain in the lumbar area of their back were considered. All types of accidents thus described, whether they were reported immediately or after several days, were included in this determination. There was no effort made to determine whether or not the patients were malingering or sincere.

In my observation over a period of several years, I have found that individuals who had these abnormalities in their backs did not appear to be any more susceptible to accident such as I have described, than the individual who had an approximately normal back. In many of the text books and in the literature, there has been a tendency for the profession to describe as a predisposed cause, the injury of these malformations. With this in mind I have set about to either prove or disprove this contention. This series was started on November 4, 1933, and was completed in July, 1938. Each patient was given a physical examination and anterior-posterior X-ray of the lumbar sacral area. All patients who were found physically fit for labor were allowed to work. None were discriminated against because of abnormalities in their back. They continued to work for the five-year period, with some exceptions, and were re-examined at intervals of one to two years. However, no further X-rays were made of their backs unless they complained of pain or had had some type of accident. The treatment given the patients who were injured was identical, regardless of whether or not there was an anomaly found in the back.

In differentiating between the so-called normal backs and the backs with an anomaly, different anomolous conditions were described and used as a basis for classifying these conditions. Spina bifida occulta of the sacrum with no evidence of a center of ossification and ranging from a minute opening to one of approximately one-half inch in diameter is one of the most common type. The large spina bifida occulta with a center of ossification representing the spinus process was a second type. The incomplete formation of a sixth lumbar vertebra with either sacrum on the left or right was not included in this group unless there was a definite evidence of an opening or a malformation of the lamina of this rudimentary vertebra. A series of photographs and X-rays reporting this condition are shown in figures. The X-ray pictures taken were all anterior-posterior flat plates, and were read from day to day.

In this series of 6,391, 820 anamolous backs were found, or a per cent of 12.85. This per cent ranges within the means of most per cents given by the authorities who set as an average, from 10 to 20 per cent. In this group there were found 728 generalized exostosis. A great number of this group were not allowed to work, but there was no differentiation made between patients with exostosis and spina bifida, so that it is reasonable to assume that the same relative number of patients with exostosis with spina bifida and without spina bifida were not allowed to work.

During this five-year period that these 6,291 men were allowed to work they received 3,412 accidents. Of this, 5.83 per cent were back injuries of the type I have described in the previous paragraph. The total number of accidents is rather high, but this work is considered hazardous, since a great per cent is underground. The 5.83 per cent due to back injuries does not include those accidents which may be attributed to direct trauma such as direct contusion due to either falling objects, or patients falling against their backs. It includes only those accidents in which the patients were doing their ordinary work and felt a sudden catching pain in the region of the fifth vertebra, which either forced him to discontinue working at the time, or became more severe at a later date. Whether or not it was necessary for him to stop work, he did report his accident and receive medical attention. It was not always necessary for the patients to discontinue working, but a certain per cent reported their accident and received treatment while performing their duties.

There was a total of 199 back injuries over this period of time. One hundred seventy-two individuals who had X-ray pictures made of their spines previous to their employment reported injury of the type which fell into the classification under consideration in this article. Of this number, 153 had no evidence of spina bifida abnormalities, however, a certain per cent of these had other abnormalities either due to trauma, infection, or anomalies. Of the total 172, 19 who had spina bifida reported accidents,

or a per cent of 10.13. From these figures it was determined that 10.13 per cent of all the individuals who reported accidental injury to the backs had spina bifida of the sacrum.

A further analysis shows that of the 153 cases with normal backs 39, or 20.27 per cent, had prolonged healing periods or eventually became cases for litigation. Of the 19 cases who had spina bifida, two, or 10.53 per cent, had prolonged healing periods. Of this entire group there are no cases at this time that have not returned to their ordinary manual labor, and who are working as satisfactorily as they did previous to their accident. In other words, of this entire 172 cases there is at this time none who has a total or partial disability to our knowledge. None of these cases was operated, and the treatment was conservative. Only a comparatively few were hospitalized. As was stated before, a certain per cent were treated while doing their regular work and lost no time as a result of their accident.

In reviewing this data it is obvious that the per cent of cases who had spina bifida correspond very closely to the per cent of individuals who were allowed to work with spina bifida. Furtherfore, it is obvious that the healing period is not prolonged because of this anomolous condition, and that the individual is no more susceptible to permanent disability than the individual who has a comparatively normal back. As a matter of fact, in our observation with this group of men it was concluded that this type of back injury does not tend to permanent disability. However, certain cases were rather stubborn, and healing periods were prolonged. A certain number of them fell into the hands of attorneys, and it was necessary for a certain period of litigation and settlement before the patients returned to their labor.

SUMMARY

1. There has been a tendency in the literature to consider a common abnormality, spina bifida occulta of the sacrum, to be predisposing to injury and to a prolonged healing period following.

2. It was the purpose of this article to determine whether or not spina bifida occulta pre-disposes to a weakness of the spine.

3. Over 6,000 individuals were given physical examinations which included AP X-rays of the lubmo-sacral area, and all of these individuals were allowed to work.

4. An accurate record of the accidental injuries to these indviduals was kept over a period of five years. From this record it was determined that 172 patients who had been previously X-rayed received alleged accidental injuries to their lumbar spine.

5. It was determined from these physical examinations that 12.85 per cent of all the individuals had spina bifida occulta of the sacrum or fifth lumbar.

6. Of these 172 patients, 19, or 10.13 per cent had spina bifida occulta.

7. It was determined that 20.29 per cent of the cases with normal spines had prolonged healing periods or became cases of litigation as compared to 10.53 per cent of individuals with spina-bifida occulta.

Conclusion: This record leads one to conclude that spina bifida occulta is not a predisposing cause for simple back sprain, and that it does not effect a prolonged healing period in individuals who have received injury to their spine.

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The Use of Sulfapyridine and Allied Drugs In the Treatment of Pneumococcus Pneumonia*

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Whitby,[1] by his epochal making discovery in 1938 that mice could be protected from the pneumococcus with sulfapyridine, gave the medical profession a potent weapon for lowering the mortality of pneumonia. Soon after Evans and Gaisford[2] reported excellent results in treating one-hundred cases of pneumococcus pneumonia with sulfapyridine, numerous reports have followed. [3-4-5-6-7] The mortality has been lowered from around 34 per cent to 6-9 per cent for pneumonia caused by the pneumococcus.

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Sulfapyridine also is of value in treating staphylococcus, streptococcus and influenza bacillus infections. Most cases of pneumonia are caused by either the pneumococcus or one of the above. In this list may be included the post-operative pneumonias which, according to Hinshaw,[8] respond favorably to sulfapyridine. For these reasons treatment should not be delayed if the physical and x-ray signs point to pneumonia.

The initial dose in an adult is usually three to four grams. Some men start with two grams and repeat the same dose at the end of two hours. Following the initial dose, one gram is given every four hours until the temperature has been normal for thirty-six to forty-eight hours. The dose may then be cut to one gram every six hours and from then on to one gram t.i.d. and so on until the drug is stopped. The blood level of sulfapyridine is important and should be watched daily. The above dose will as a rule give a level of between 2—10 mg. per cent. 4—5 mg. per cent is probably about an average blood level and is usually adequate. Patients will sometimes die with greater blood concentrations and sometimes live with lower blood levels.

Sulfapyridine is equally as valuable in treating children who have pneumonia. Authors differ a little in their dosages. Long[9] gives .5 grams—2 grams as an initial dose and follows this with .25 gm.—.5 gm. every four hours depending upon the weight of the child. He likes to have the blood concentration 4 mg. per cent or more. Friedenwald[10] gives 1—1½ grains of sulfapyridine per pound of body weight each twenty-four hours starting with a large initial dose. In children under six a 7½ grain initial dose was given, followed by 3¾ gr. every four hours. If the children were over six, fifteen grains was given as an initial dose and followed by 7½ grains every four hours. The average total dose was 80 grains with a minimum of 15 and a maximum of 150 grains. With these dosages blood levels of between 5 and 10 mg. per cent could be obtained and maintained.

The action of the drug is bacteriostatic rather than bacteriocidal. Susceptibility of different strains to sulfapyridine vary as Long[11] and MacLeod[12] have shown. Some strains are what is termed sulfapyridine fast and are not inhibited by the drug. This characteristic can be passed on through several generations by culturing or inoculating laboratory animals. This condition can be produced in patients by giving insufficient amount of the drug.

Sulfapyridine occurs in the blood as a free and a conjugate form called acetyl sulfapyridine. The conjugated salt is inactive. 40-80 per cent of the sulfapyridine at times becomes conjugated according to Long.[7] 51-82 per cent of the entire drug is eliminated in the urine and the rest in the feces. The conjugated form is in higher concentration in the urine and is also insoluble, sometimes the crystals precipitate out, coalesce and form calculi which are non-opaque to the x-ray.

Definite improvement should begin after 24-48 hours of sulfapyridine medication. The white count drops about 24 hours later. If improvement does not begin in this period of time, one should think seriously of using specific serums. Because serum may have to be used, it is advisable whenever possible to determine the type of infecting pneumococcus. Sulfapyridine is of no value in the complications of pneumonia.

Toxic symptoms and complications have been reported due to sulfapyridine. Nausea and vomiting, which are central and local reactions, are the most common occurring in nearly 90 per cent of cases. The giving of Soda bicarbonate has been recommended for this. Also the giving of milk or giving the sulfapyridine in applesauce, etc. has been tried. Anemia is probably the next most common complication and may become so severe that the drug has to be discontinued. Many patients become irrational and have the sense of unreality while taking the drug. Other complications are dermatitis, fever due to the drug, leukopenia, methemoglobinemia, nephrosis and urinary suppression with calculi formation and numbness and tingling of the extremities. The drug should be withheld from those with a history of previous toxic reactions to either sulfanilamide or sulfapyridine and stopped if marked anemia, leukopenia, jaundice, hematuria, drug fever or rash developes. Tsas[13] and associates recommend cystoscopic examination and passage of catheters up the ureters on all cases of anuria. More than likely the anuria is being caused by the plugging of the ureters and kidney pelves and calyces by sulfapyridine calculi. The calculi can be rather easily washed out with irrigations of warm water.

Sulfapyridine may be given intravenously, intra-spinously or subcutaneously by a method devised by Haviland and Blake.[14] They found that sulfapyridine could be dissolved most easily by using 2 grams of the drug in a liter of aliquot parts of normal saline and 5 per cent glucose that has been brought to a boil. They recommended spacing the medication so that 6 gms. was given the first 24 hours and 4 grams each 24 hours thereafter.

In severely ill patients and patients who are vomiting, one may feel that the drug of choice is sodium sulfapyridine. The dosage[15]

recommended for this drug is 0.05—0.06 grams per kilogram of body weight. The dose is weighed out and dissolved in enough water to make a 5 per cent solution. The resulting solution is unstable to heat so cannot be boiled, is isotomic, alkaline and can only be given intravenously because it is very irritating to the subcutaneous tissue. The same dose should be repeated in 4-6 hours and again for a third dose if needed. Rarely are more than two doses needed. 5 c.c. a minute is the rate of injection recommended. At the same time as the intravenous injection is started, begin sulfapyridine by mouth giving 1 gram every four hours. Sodium bicarbonate in amounts equal to the amount of sodium sulfapyridine administered should be given. This method will raise the blood level to an effective point rapidly. The sodium ion is soon split off leaving sulfapyridine in the blood. Its fate has already been discussed. The intravenous route does not eliminate nausea and vomiting. Sulfapyridine can be recovered from the gastric contents soon after an intravenous injection. There are no incompatibilities with other drugs but still Long[15] does not use saline cathartics. There is no lowering of the CO_2 combining power and hence no production of acidosis. The contraindications to the use of the sodium salt are the same as for sulfapyridine.

Recently two other sulfanilamide derivatives have been added to our armamentarium, namely, sulfathiazole and sulfamethylthiazole. Sulfathiazole is about equal in efficiency to sulfapyridine in pneumococcus infections and a little better in staphlococcus infections. In man it is more readily absorbed and excreted faster than sulfapyridine (considerably less of it appears in the urine in the conjugated form). Because of the rapidity of excretion a constant blood level is difficult to maintain. There is less nausea and vomiting with sulfathiazole but more cases of drug rash and fever reactions occur. Occasionally it will cause injection of the sclera. Long had several cases of mild hematuria and one case of anuria. There was no decrease in the CO_2 combining power of the blood. The dose recommended is 4 grams to start with followed by 1 gram every 4 hours.

Flippin[17] in reporting his cases at the meeting of the American College of Physicians in Cleveland found the two drugs, sulfathiazole and sulfapyridine, about equal in efficiency in treating pneumonia. Sulfathiazole did not produce as much nausea and vomiting nor as many cases of blood dyscrasias or renal complications as sulfapyridine. He gave an initial dose of three grams, repeated it in four hours and then gave one gram every four hours thereafter. He continued that treatment until the temperature was normal for 48 hours, usually giving 25-40 grams in all. With the sulfathiazole he recommended giving equal doses of sodium citrate. When necessary he gave sodium sulfathiazole intravenously in a 5 per cent solution giving .06 gram per kilogram of body weight. As a rule a single dose was all that was necessary.

Dubos at the last meeting of the American College of Physicians reported his interesting work. He has been able to extract an enzyme that is formed by bacteria growing in soil which will dissolve the capsules of the pneumococci. The enzymes are specific, only type III enzyme acts on type III pneumococci, etc. They act both in vitro and in vivo but as yet have not been put to clinical use on human beings.

In conclusion, I would urge and recommend the use of sulfapyridine or sulfathiazole in the great majority of pneumonia cases. The dangers from its use are not great if one uses reasonable care and judgment in prescribing it. My own experience with its use is not great but the results are comparable to those reported by others. Instead of now dreading pneumonia we can attack it with more than just symptomatic treatment and hope.

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DISCUSSION

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The Use of Sulfapyridine and Allied Drugs In the Treatment of Pneumococcus Pneumonia

Chemotherapy is certainly coming into its own in the treatment of infectious diseases. The lay press is extolling its virtues and anyone not using it in every case is considered by the laity as an old fogey. Chemotherapy was dramatically called to public attention when Ehrlick in 1904 developed what he

thought was the sterilissimus magna, a drug that would kill the parasite or bacteria, and at the same time not cause too much damage to the host.

Mercurochrome was lauded as being a panacea, but it seems to have gone the way of all flesh. Now these azo dyes are the stylish ones. They started with Prontosil (1908) neoprontosil, sulfanilamide, sulfapyridine and sulfathiazole in quick succession, all being like a yearly model of an automobile, which is being put out before you know how to manage the older one, an innovation being thrust upon you. These chemicals have a good and a bad side—and the toxic effects reaching practically every organ with its protean symptoms. Neoprontosil is possibly the least toxic and again the least effective, but we are able to supplement the sulfanilamide or —pyridine by the neoprontosils, when the blood level is not high enough and toxic symptoms are manifested. Sulfapyridine in my hands can hardly be held to therapeutic doses until it manifests toxic symptoms. It is chemotaxic to certain groups of the pneumococci and needs serum as a supplemental measure in groups I, II and VII, or the vis medicatrix matura to supplement it in other types, hence let us not discard serum therapy with its specificity, when we are dealing with these types. Fluids should be limited while using these dyes so as to concentrate the chemical in the blood stream. How it acts is only known empirically as too many theories are advanced. Certainly its concentration in the blood stream is not strong enough to kill the bacteria in vitro as it evidently acts by preparing the capsule of the pneumococcus and the antibodies do the rest. This theory cannot hold good when dealing with the streptococcus group.

At the College of Physicians meeting in Cleveland, we were told that sulfathiazole was equally effective and less toxic, but yet is not commercially available, so its qualities have yet to be evaluated.

The essayists warn that the patient should be hospitalized or at bed rest and under the care of a very observant physician. A federal law becomes effective July 1, which will not permit these azo dyes and barbiturates to be sold over the counter without a prescription, so they may stop the indiscriminate sale of a drug which has its virtues, but unfortunately also has a very sinister side.

The question is, will it have a place in the firmament next year that it has this year.

Thiamin Chloride: Its Indications and Methods of Use*

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New developments in the field of vitamin therapy during the past two or three years have progressed at such a delirious rate, that it seems difficult, if not hopeless, to establish definite lines of thought in regard to the application of these various food accessories. There is little doubt that they constitute a very necessary factor to normal nutrition and that most important deficiency diseases are caused by insufficient vitamin intake over long periods of time.

Thiamin chloride, since its successful synthesis by Williams in 1936, is commanding an ever increasing interest in the field of vitamin therapy, due to the growing realization of its fundamental importance to all living processes. Williams and Spies state, that since it is indispensable to higher animals, insects and for higher plants, it surpasses all other known specific substances in the scope of its biochemical significance. Riboflavin is probably its nearest competitor in this respect.

The great volume of literature which has accumulated during the past few years amply bears out the statement of these authors, and at the same time, has caused considerable confusion regarding the practical application of a very essential food factor. Numerous writers have reviewed its chemistry and physiology, which is quite complex, and will not be dealt with here. It is absorbed from both the small and large intestine with a wide range of variation, according to Cowgill, depending upon individual idiosyncrasy, the form in which it is ingested, the presence of other materials in the bowel and the state of intestinal function particularly in regard to motility. It is excreted in both the urine and feces, and attempts have been made to determine the vitamin B1 content of the blood, but little accurate information is available to date as to what constitutes normal blood levels.

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Pathology

The important morphologic changes which have been observed in B1 avitaminosis in advanced states, such as beriberi, are usually considered under three headings, namely: 1. The nervous system. 2. The heart. 3. Edema (Williams and Spies).

THE NERVOUS SYSTEM: Degenerations of the nervous system are generally considered as among the most characteristic manifestations of vitamin B1 deficiencies. These include degeneration of the myelin sheaths and fragmentation and atrophy of the axis cylinders in the spinal cord, and peripheral nerves. Degenerative changes have also been observed in the sympathetic nervous system.

Many investigators have questioned the specificity of these nervous system lesions (Davison and Stone: Engel and Phillips, et al.) chiefly because of the observation that lesions which cannot be distinguished from those believed to be due to thiamin deficiency have been found in birds and rats, subjected to inanition. Loss of appetite occurs early in vitamin B deficiencies and may lead to inanition. However, as Vedder points out, human subjects with beriberi are often well-nourished and it seems difficult to attribute these phenomena to inanition under such circumstances.

THE HEART: The pathology of the heart in B1 deficiencies is indefinite and would seem to be largely functional as the result of poor myocardial tone. In severe cases death has resulted from ventricular failure but in the vast majority of cases the heart has been enlarged to the right or left and exhibits varying degrees of myocardial failure. These changes are reflected in the electrocardiogram and careful clinical judgment should be exercised to avoid serious errors in interpretation.

Dry and wet forms of beriberi have been described depending on whether edema is present or absent. The edema is usually first observed in the lower extremities and may progress to general anasarca. The fluid is characteristically of the transudate variety, with low protein concentration and low specific gravity.

Function

Thiamin, according to Williams (2) seems to possess an almost universal function in living cells. Its action seems to be exerted through its participation in several enzyme systems the most important of which has to do with the normal disposal and utilization of pyruvic acid, an intermediary product in carbohydrate metabolism. Largely due to the work of Peters and his associates, it is generally believed a characteristic feature of vitamin B deficiency is a diminished oxygen intake and a resulting accumulation of pyruvic acid in the tissues, particularly in the brain. It is essential for the normal metabolism of all cells, and may produce conspicuous defects in whatever tissue or organ happens to be congenitally subnormal in function, or to have been impaired by disease or other unfavorable circumstance. Its action is evident only in the presence of vitamin B deficiency, according to Molitor and Sampson.

Food Sources

Vitamin B1 is found in a wide variety of foods and curiously enough, is not contained in any one food in large amounts. Vegetables of all kinds, milk, eggs, fruit and meat are common sources. It has been found to be quite stable to heat.

Clinical States in Which Thiamin Chloride is Indicated

It is impossible, due to the far-reaching scope of clinical indications of thiamin, to cover this phase completely. Therefore, to avoid confusion, and to keep within the scope of practical application as far as possible, an attempt will be made to group the indications mentioned under four headings, namely: 1. The nervous system. 2. The heart. 3. Gastro-intestinal. 4. Metabolic.

NERVOUS SYSTEM: Thiamin is essential to the normal function of the nervous system, and as far as the writer has been able to determine to date, it is indicated in practically any form of general or localized neuritis. Some of the commoner forms of nervous system involvement which have yielded to thiamin therapy may be enumerated, and consist of clinical states such as the following: Polyneuritis which occurs in chronic alcoholic states; neuritis associated with toxic factors (heavy metal; endogenous) and inflamitory origin (Vorhaus); the polyneuritis of pregnancy; generalized neuritis secondary to gastro-intestinal disturbances such as pyloric stenosis incident to peptic ulcer; short circuiting operations of the intestinal tract. Its use is indicated in, and has been reported as of great value in such conditions as multiple sclerosis, degenerations of the pyramidal system of unknown etiology, and in many other forms of localized neuritis such as is found in cases of pain of ischemic origin (Naide.) It is interesting to note that while there is no evidence of the existence of vitamin B1 deficiency in cases of rest pain, daily doses of 100 mg. given intravenously relieves the pain, and it was necessary to keep these patients on maintenance doses to prevent its return.

Vitamin B1 does not supplant the usual methods of treating peripheral vascular disease, and measures to relieve peripheral circulation should be used in these cases.

Borsook, et al, have during the last year reported a study of the effects of massive doses of thiamin on the pain in major trigeminal neuralgia, and also in cases of sphenopalatine neuralgia and other types of atypical neuralgia. Large doses of thiamin, ranging from 10 to 100 mg. daily were given intravenously and in most cases supplemented with 30 cc. of an aqueous solution of rice polishings added to a high-vitamin low carbohydrate diet. The results of treatment in these cases showed an improvement in a sufficient number to warrant its continuance, although this improvement showed a wide variation, and these authors feel they are at present unable to evaluate the relative contribution to the relief of pain of the vitamin B complex. They state, however, that it appears to be thiamin.

In this connection it is interesting to observe the variable results obtained by the use of thiamin in a variety of pains encountered in medical practice, such as para-orbital neuralgia of undetermined origin and the facial pains which frequently accompany chronic maxillary sinusutis and ethmoiditis. Thiamin should be given a trial in increasing dosage in these types of pain but one should not overlook the presence of specific causes and their removal when possible.

Johnson, in a small series of cases, suggests the value of thiamin chloride in the treatment of tobacco (toxic) amblyopia, and Ochner and Smith have recently reported favorable results in cases of painful varicose ulcers by the administration of 1500 units of thiamin three times daily. This dosage should be doubled if the symptoms do not subside in three or four days. Stern, reporting a series of 28 cases in which 120 intraspinal injections of thiamin chloride in doses ranging from 1 to 100 mgm. was given, regards this vitamin as having a very powerful rejuvenating action unknown to any other drug, and as being of great value in relieving intractable pain in cases of inflammatory and degenerative diseases of the central nervous system.

There are numerous and sundry other indications involving the nervous system where relief has been claimed through the use of this vitamin. Time does not permit discussion of them.

HEART: The outstanding characteristics of vitamin B1 deficiency in heart disease are, according to Wood, peripheral vasodilation and right ventricular failure. The former is evidenced by warm skin, capillary pulsations, pistol shot sounds over bounding major arteries, and low diastolic pressure. Signs of right ventricular failure are elevated venous blood pressure, enlarged and tender liver and dropsy. Patients exhibiting the above symptoms should be questioned regarding dietary restrictions over a long period of time. Electocardiographic changes have been reported by Dustin, et al, in patients exhibiting clinical signs of vitamin B1 defeciency and are very similar to those changes found in myocardial infarction. Extrasystoles of a functional character will often respond promptly to thiamin therapy in a way that is still not fully understood. Cases of this nature are seen quite often in ordinary medical practice and warrant careful consideration because while a majority are of no serious significance, it has only recently been possible to ascribe a definite neurogenic origin to them. In other words certain nerve tracts coming from the hypothalamic area seem to be involved in the production, in some instances of extraventricular systoles.

GASTRO-INTESTINAL SYMPTOMS: According to Cowgill, there is considerable evidence that lack of vitamin B does not cause any specific dysfunction of any portion of the gastro-intestinal tract. Symptoms which are commonly observed in patients with vitamin B1 deficiency, are anorexia, glossitis and diarrhoea. The pathogenesis of these symptoms is doubtful. Evidence has accumulated, both pro and con, regarding the relationship of vitamin B1 specificity in such clinical states as peptic ulcer, gastric and intestinal atony, spastic colon, hypochlorhydria and the like. There is no doubt that poor appetite is a prominent symptom in B1 deficiency and the response to thiamin therapy is striking. There seems little doubt that motility of the intestinal tract is increased by thiamin as is evidenced frequently by the establishment of normal bowel movements by small oral doses. However, the action of Riboflavin should not be overlooked here as the complex is more effective than thiamin alone.

METABOLIC: As stated by Cantarow, it has long been known that an abundant carbohydrate intake hastens the development of polyneuritis in B1 avitaminosis. Also that the substitution of certain fats lowers the vitamin B requirements. The essential nature of the disturbance in carbohydrate metabolism in vitamin B1 disturbances consists as has already been mentioned under function, of the accumulation of pyruvic acid in excess in the tissues and body fluids. Administration of adequate amounts of vitaman B1 in the preoperative preparation of hyperthyroid patients has been reported as being beneficial (Frazier and Ravidin). These authors feel that patients can be prepared for operations in a shorter time, and show a more rapid fall in heart rate. It is suggested that the tachycardia in these cases may be due in part to a lack of vitamin B1.

Other metabolic disturbances have been mentioned, such as anemia, anhydremia, etc. Nothing definite is known of the biochemical connection of these states with thiamin deficiencies.

REQUIREMENTS

In regard to vitamin B1 requirements of the human body, it may be stated that the Technical Commission of the League of Nations Health Committee has made the following recommendations: An allowance of 10 I. U. per 100 calories of food intake seems to be adequate for adults. The diets of pregnant and lactating women should contain 20 to 30 I. U. per 100 calories. Infants should receive 10 to 15 I. U. per 100 calories and 200 to 250 I. U. daily is probably sufficient for children of nursery school age. Factors involved in increased requirements of B1 which may be mentioned as of importance are increased metabolism due to long continued fevers; faulty assimilation as represented by such states as ulcerative colitis, protracted diarrheas and carcinomas of the stomach. Increased elimination as found in polyuria of diabetes mellitus may also create an increased requirement.

METHODS OF USE AND DOSAGE

Vitamin B1 may be given either in the form of pure crystalline thiamin or as Brewers yeast, plain or autolyzed. The crystalline thiamin may be given intravenously, intramuscularly or orally depending on the clinical state for which it is being used. As in any other therapy the most effective method is to give it intravenously or intramuscularly until the deficiency is overcome, or until clinical improvement has taken place, and then resort to maintenance doses given orally. As has already been mentioned, it has been given in large doses intraspinally in certain central nervous system disturbances with no untoward reactions. Maintenance doses have been stated to be about one to two milligrams daily. Doses of 100 milligrams have been given intravenously with no ill effects. Toxic symptoms are tremor and muscle spasms and respiratory failure.

SUMMARY

A review of the more recent literature on thiamin chloride is reported. The important morphologic changes in thiamin deficiency have been enumerated together with some of the more common clinical states in which it is indicated and the methods of use and dosage are discussed.

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DISCUSSION

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Thiamin Chloride: Its Indications and Methods of Use

In order to discuss intelligently the excellent paper Dr. Rewerts has presented on such a vital subject as thiamin chloride, one should be able to combine personal experience and a knowledge of the literature dealing with its many phases.

Lacking the former, to any great degree, except as, no doubt, most of us have, who have used thiamin chloride for a variety of indications, based on its widespread possibilities, I hope you will pardon me if I may repeat and perhaps emphasize some of the points mentioned in the paper.

Although, as stated, there may be few *specific* indications for vitamin B therapy, the extraordinary claims for the therapeutic efficacy of this vitamin have created tremendous lay as well as scientific interest.

Thiamin chloride is known as the anti beriberi or anti neuritic factor of vitamin B, yet it is recommended in various other disturbances of the nervous system; namely, neuralgia, alcoholic psychosis, tabetic lightning pains, multiple sclerosis, trigeminal neuralgia, herpes zoster, alcohol-tobacco amblyopia, irradiation sickness, cardiavascular dysfunction secondary to alcoholic neuritis and anorexia.

A clearer conception of the real nature of vitamin deficiencies is one of the modern achievements of medicine. Of chief interest, in its relationship to neuritis, is the anti neuritic vitamin B. Neuritis of this kind is observed in many diseases such as gastric carcinoma, mal-functioning gastroenteric stroma, obstructive duodenal ulcer, tuberculosis and in prolonged vomiting and malnutrition resulting from unwise diets in cases of normal, alcoholic, hysterical and psychotic patients.

The paper speaks of the fact that human subjects with beriberi are often well nourished, questioning the condition of inanition as related to thiamin deficiency. Might it

not be possible that in some cases, the muscular atrophy is obscured by the edema and that when one of these so-called cases of wet beriberi begins to loose the subcutaneous collection of fluid, is the true state of inanition revealed.

As was mentioned, vitamin B deficiency causes a diminished oxygen intake and resulting accumulation of pyruvic acid in the tissues. The laboratory determination of the blood pyruvic acid concentration as an indication of vitamin B deficiency offers a wide field for further research in this problem.

Thiamin deficiency most commonly manifests itself as poly neuritis. Should vitamin B deprivation continue, symptoms increase and group themselves under alimentary, peripheral nervous and cardio vascular symptoms.

Changes in the alimentary tract produce altered motility, which results in anorexia, nausea, vomiting, diarrhaea or constipation. The latter, in part at least, may be due to the bulky carbohydrate diet which the average patient consumes who is suffering from this malady.

Myelin degeneration of the peripheral nervous system leads to signs and symptoms of peripheral neuritis.

Cardio vascular manifestations are tacchycardia, palpitation, dyspnoea and substernal or precordial pain. The pain may be quite as severe as that experienced in angina pectoris. The cardiac symptoms are paroxysmal and are the chief cause of death in beriberi.

Deficit in vitamin B may result from an insufficient intake of this vitamin or from poor assimilation. The condition under which a normal intake becomes relatively insufficient are infectious or toxic states, cachexia, pregnancy or lactation, strenuous work, a diet rich in carbohydrates and in general by an increase in the general metabolism.

A deficient utilization of vitamin B occurs in the presence of hepato digestive trouble, especially atrophic gastritis with hypechlorhydria or achlorhydria.

The discovery of vitamins and their relation to disease has been an outstanding contribution to medical science. With enthusiasm the physician has added them to his armamentarium.

Fortunately it has been shown that, although 20 to 50 mg. of vitamin B may be an adequate therapeutic dose, 90 to 100 mg. can be tolerated without apparent harm. With this latitude of safety, the physician may feel safe in ultilizing such doses as may be necessary for therapeutic effect.

Conservative Approach to Sulfapyridine Use

A more conservative approach to the use of sulfapyridine, especially as to dosage, in the treatment of pueumonia aud more discrimiuation in substituting it for sulfanilamide in treating other iufections are advocated by W. Hurst Brown, D.M., M.R.C.P., William B. Thornton, M.D., and J. Stuart Wilson, Torouto, Ont., in *The Journal of the American Medical Association.*

In their study of the toxic or poisonous reactions of sulfauilamide and its derivative, sulfapyridine, the three men found that the latter is esseutially more toxic than its parent drug and also that there is a narrow rauge between the blood concentrations of sulfapyridine which combat infection and those which carry an unwarrauted risk of serious toxic reactions.

They point out that: "Cliuicians have uot yet reached agreement as to the blood concentratious of sulfapyridine that are adequate to control pueumonia of pneumococcic origin. Until matters of such fundameutal importance are settled, expediency should be tempered by caution.

They believe that high concentrations of sulfapyridine in the blood should be avoided unless it is certaiu that lower coucentrations are not controlling the infection. The highest concentrations, they say, should be reached at the very beginning of treatment and should be reduced after a short period of maintenance. Siuce eliminatiou of sulfapyridine takes place through the urine, toxic reactious may often be avoided by giving euough fluids to insure an adequate volume of urine.

In au analsys of 100 cases treated by each drug, the authors pointed out: "Serious toxic manifestations were fouud twice as frequently in patients treated by sulfapyridine as compared with the series on sulfanilamide. Patieuts treated with intensive doses and in whom high blood conceutration of sulfapyridine were attained showed a very high incidence of serious reactions."

Serious and fairly common complications following inteusive sulfapyridine treatment, particularly wheu the concentrations in the blood are high, are retention aud inadequate secretion of urine and blood in the urine. "Although a decrease in white blood cells occurs more frequeutly in the sulfapyridine series and especially when the dosage is heavy, it is also encountered in both series and may occur when the doses are small or treat ment is of short duration," the authors say.

"Sulfapyridine may remain in the liver in small quantities for as loug as forty days after chemical treatmeut has been terminated. No conclusion has beeu reached as to whether sulfapyridine causes inflammation of the liver."

The authors emphasizes that the vomitiug ofteu accompanying sulfapyridine treatment is uot always a minor complication but may cause great discomfort, amounting even to agony. "It may be too much to say that the frequency with which the body is impelled to resist the retention of sulfapyridine should at once raise the question of its esseutially toxic character, but the protest must at least be significant," they say.

Pan American Tuberculosis Congress

The fifth Pan American Congress of Tuberculosis will be held iu Buenos Aires and Cordoba, Argentina, October 13-17, under the presidency of Dr. Gumersindo Sayago, Cordoba. The official subjects of discussion will be: Evidences of tuberculization of the South American countries, heredity and contagion in tuberculosis, and the pulmouary aspects of the extrathoracic forms of tuberculosis.

Adult Human Pulse Rate Is Variable

"The adult human pulse rate is considerably more variable than many persons think," *Hygeia, The Health Magazine* declares.

"Extensive and exact studies of the measurement of the heart rate of persons in New York City have shown pulse rates ranging from 55 to 120 beats per minute in a healthy person in a normal twenty-four hour cycle."

• THE PRESIDENT'S PAGE •

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GROUP HOSPITAL SERVICE

G. H. S.—Group Hospital Service—is a mutual non-profit organization sponsored by your State Medical Association and the Oklahoma State Hospital Association. It is the only hospital plan in Oklahoma having these two organizations' endorsement. Every county medical society as well as every individual doctor I am certain will give G. H. S. their wholehearted support.

Early in 1939, the need for a financially sound and strictly non-profit hospital plan had evidenced itself to the Council of the Medical Association. Through the efforts of a committee appointed from both the Medical and Hospital Associations, augmented by interested philanthropic lay individuals, the present plan of G. H. S. was formulated. This committee's work over a ten-month period in studying different successful plans in operation throughout the country has been rewarded in the success and sociological job being accomplished by Group Hospital Service.

G. H. S. has been in operation since April of this year and, of necessity, its original activities were confined to Tulsa and Oklahoma Counties because of the concentrated population in these areas. It is gratifying, however, to report that in the last two months. G. H. S. has taken its service into thirteen other counties of Oklahoma for the betterment of community health and happiness.

You should consider Group Hospital Service an activity of your Association and as such assist in bringing its activities into your community. You are backing it; now start boosting it. It is already a success, but your individual and collective efforts can make it a greater success. Boost Group Hospital Service.

Henry N. Turner

President.

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EDITORIALS

MEDICAL PREPAREDNESS

In recognition of the ominous implications of the second great world war in less than three decades, and in preparation for a national emergency which might at any time threaten our peace and integrity, and our personal liberty and prosperity, the House of Delegates of the American Medical Association at its recent meeting in New York City passed appropriate resolutions providing the necessary machinery to facilitate prompt mobilization of the members of the medical profession and to make available all allied services, such as medical education, hospitals, etc.

A Committee on Medical Preparedness was appointed with Dr. Irvin Abell as Chairman. The Oklahoma State Medical Association and its County Societies as units of the American Medical Association, should be ready if and when the call comes. The will to serve should be unanimous, the response to the call should be accompanied by a willingness to go anywhere and serve in any way that seems best. Naturally this presupposes careful organization and individual classification and rating according to general fitness, special training and experience. It should not be forgotten that medical preparedness must take into consideration Civilian Medical Service and Public Health, as well as the requirements of the Army and Navy.

In case the call comes, we would do well to emulate our neighbors in the Canadian Medical Association. At the New York City meeting of the American Medical Association, Dr. T. C. Routley, speaking for the Canadian Medical profession said: "When our country entered the war, our association did just what you would do here under like conditions. We told the government that we were prepared to assist. Within three days we had mobilized the medical profession of Canada. Ninety per cent of our profession volunteered their services, and of these 90 per cent volunteered to go anywhere or do anything that might be required." (1)

The accompanying athletic figure represents the work of Dr. Tait McKenzie (2), a Canadian physician who, with the touch of a Greek sculptor, employs his knowledge of anatomy in the portrayal of human grace and beauty. His beautiful war memorials in England and Scotland are now being threatened by the destructive implements of modern warfare.

The sculptured soldiers presented here might well represent the highest type among our own young men. If the call should come they will merit the best the medical profession can give. Fortunately doctors go to war, not to destroy, but to save life.—L.J.M.

* (1) Jr. A.M.A., June 22, 1940. Vol. 114, No. 25, U. 2474.
(2) "The Volunteer."



THE VOLUNTEER *Rosamond War Memorial, Almonte, Ont., Canada*

Proceedings of the House of Delegates
Oklahoma State Medical Association
May 6-7-8, Tulsa, Oklahoma

The following transcripts of the three meetings of the House of Delegates, in Tulsa, May 6, 7 and 8 have been edited. All actions by the House of Delegates have been included, but should any member of the Association desire more detailed information on any action of the House, it will be immediately furnished by the office of the Executive Secretary, 210 Plaza Court, Oklahoma City.

Since the first two meetings of the House of Delegates were devoted exclusively to the reading of reports, the introduction of resolutions, election of officers, and the adoption of the amendments to the Coustitution and By-Laws, and since the new Constitution and By-Laws are being printed to be sent to all of the component county societies, a complete recording of the Constitution and By-Laws will not be made in these minutes. The attention of the members of the Association, however, is directed to the rewording that will occur in some sections of the Constitution and By-Laws that is different from the original drafts sent to the county societies for study prior to the Annual Meeting. However, in no instance is the intent or purpose of the section changed. The rewording is only for the purpose of clarification. All resolutions adopted will be printed in full in the August issue of The Journal.

MONDAY, MAY 6

The House of Delegates of the Oklahoma State Medical Association convened in the Crystal Ballroom of the Mayo Hotel in Tulsa at 8:30 p. m., with Dr. J. D. Osborn, Speaker of the House, presiding.

The Speaker opened the meeting by announcing committee appointments. These were: Credentials Committee—Dr. McLain Rogers, chairman; Dr. C. P. Boudurant and Dr. W. S. Larrabee; Resolutions Committee—Dr. H. K. Speed, chairman, Dr. O. C. Newman, and Dr. Ned R. Smith; Sergeants-at-Arms, Dr. James Stevenson and Dr. P. M. McNeill. The Credentials Committee was requested to report, and after taking a roll call, a quorum was declared present.

Dr. Osboru uext made the announcemeut that the chair would only accept main motions, resolutions and importaut instructious from the floor that were made in writing.

The uext order of business was the reading of the miuutes of the previous meetings. Dr. Willour moved, and Dr. Larrabee seconded the motion, that siuce the minutes had been published in The Journal, their reading be dispensed with. The motion carried.

The Speaker then called upon the President, Dr. W. A. Howard, to read his report. Upou completion of the report, it was moved by Dr. O. E. Templin and secouded by Dr. J. A. Walker that the report be adopted. The motion carried.

The Speaker uext read communicatious from other state societies that had been addressed through him to the House of Delegates and, upon concluding the reading, requested that Dr. Heury H. Turner, the President-Elect, address the House. Dr. Turner spoke briefly aud stated that his message to the Association would be given after his iuductiou into office.

At the conclusion of Dr. Turner's remarks, the Speaker called for the reports of the standiug aud special committees. Since these reports had been published iu the April Journal, on the motion of Dr. L. S. Willour, their reading was dispeused with.

Following the acceptance of the committee reports, the Speaker addressed the House on the subject of the next duty of the delegates, which was the adoption of the amendments to the Constitution and By-Laws and which were now ready for fiual action. The Speaker explained the past work of the Committee appointed to draft the amendments, and their cooperation with the American Medical Association in working out a model Constitutiou and By-Laws. The Speaker also poiuted out necessary rewording chauges and explained that the changes were only for the purpose of clarification. All delegates were provided with a letter from the Committee giving the details and reasons for the changes in toto. It also was pointed out that the office of the Executive Secretary had sent copies of these instruments to the county societies for study several months before the meeting. There was no discussion from the floor on the Speaker's remarks aud the Speaker then requested that the Committee on the Coustitution and By-Laws present the Constitutiou and By-Laws section by section until they had been voted upon and passed.

The request of the Speaker was complied with, and Dr. E. Albert Aisenstadt proceeded to read the Constitutiou article by article and section by sectiou. Articles I (Title), II (Purpose of the Association), III (Component Societies), IV (Membership), X (Refereudum), and XI (Seal), were passed as read, and Articles V (House of Delegates), VI (The Council), VII (Sessions and Meetings), VIII (General Officers), IX (Finance), XII (Ethics), XIII (Amendments), and XIV (Repealing Article) were passed as amended or reworded for the purpose of clarification. All articles amended had had the proposed amendments offered at the Annual Meetiug in 1939 and were thus subject to adoptiou.

At the conclusion of the adoption of the Constitution, the Speaker requested that the Committee next present the By-Laws for adoption and, in compliance with the Speaker's request, Dr. Ritzhaupt began the reading of the By-Laws chapter by chapter and section by section.

Chapter I (Membership) was adopted upon being read as amended, reworded and clarified in Sectious 1 (Eligibility), 2 (Rights), aud 3 (Classification), and Section 4 (Good Standing) was completely deleted.

Chapter II (Annual Session) was adopted upon being read as amended, reworded and clarified in Sections 1 (Time and Place), 2 (General Meetiug), 3 (Scientific Assembly) and 5 (Section Sessions), and Section 4 (Property of Papers) as originally submitted.

Chapter III (House of Delegates) was adopted upon being read as amended, reworded aud clarified in Sections 1 (Representation), 2 (Meetiugs and Attendance), 4 (Duties of the House of Delegates) and 5 (Order of Business), and Sectious 3 (Quorum) and 6 (Memorials and Resolutions) as originally submitted.

During the reading of sub-section (e),—(Finance)—of Section 4, Chapter III, Dr. Ned Smith moved, with a secoud by Dr. H. K. Speed, that further reading of the By-Laws be dispeused with until the next day, as it obviously could not be completed that night. The Speaker accepted the motion but requested that it be amended to read at the conclusiou of Chapter III. The ameudment was accepted and the House adjourued at 12:30 a. m. to reconvene the next morning at 8:00 a. m.

TUESDAY, MAY 7

The House of Delegates reconvened at 8:00 a. m. Tuesday, May 7, in the Crystal Ballroom of the Mayo Hotel, with the Speaker of the House, Dr. J. D. Osborn, presiding. The Credentials Committee reported a quorum present, and the House adopted the Committee's report.

The Speaker at this point introduced Dr. S. E. Russ of San Antonio, Texas, the fraterual delegate from the Texas State Medical Associatiou, and Dr. Russ spoke briefly to the delegates. The Speaker also introduced Dr. Claude Chambers of Seminole, a member of the University Board of Regents, and the first physician in the state to be accorded this honor. A telegram was then read from C. P. Loranz, Secretary-Manager of the Southern Medical Association expressing his disappoint-

ment at not being able to be present, and extending his best wishes for a successful meetiug.

Upon the conclusion of the introductious and the reading of communications, the Speaker stated the next order of business would be the coutinuation of the readiug of the By-Laws aud their adoptiou.

Chapter IV (Councilor Districts) was adopted upon being read as amended, reworded and clarified in Sections 1 (Apportionmeut), and 2 (Terms of Couucilors), aud Section 3 (Changes of Districts) as originally submitted.

Chapter V (Election of Officers) was adopted upon being read as ameuded, reworded and clarified in Sections 2 (Nominations) and 5 (Vacancies), and Sections 1 (Ballot), 4 (Installation) and 6 (Nominatiou of Councilors), as originally submitted. Sectiou 5 was omitted by this action and Sectiou 6 reuumbered as Section 5. Section 3 (Time of Election) was tabled.

Dr. Aisenstadt next explained to the House of Delegates that the chapters and sections of the By-Laws from Chapter VI, Section 6, to Chapter IX had been acted upon at the meeting of the House of Delegates in 1939 and would therefore uot have to be acted upon at this time, with the exception of changing a few words in Chapter VI, Section 6, and Section 7 for the purpose of clarificatiou. Dr. Aisenstadt moved, aud Dr. Bondurant seconded the motion that the word "surplus" in Chapter VI, Section 6, be deleted and the correct terminology, the word "reserve" be inserted. The motion carried.

Chapter IX (Standing Committees) was adopted upon being read as amended, reworded and clarified in Sectious 2 (Number of Committee Members), 3 (Committee on Credentials), 6 (Committee on Legislation, Public Policy and Relations), 9 (Committee on Judicial and Professional Relations), and Sections 1 (Standing Committees), 4 (Committee on Anuual Session), 5 (Committee on Scientific Work), 7 (Committee on Medical Educatiou aud Hospitals), and 8 (Committee on Publicity), as originally submitted.

Chapter X (Dues and Assessments) was adopted as originally submitted, all amendments failing to be adopted.

Chapter XI (Componeut Societies) was adopted upon being read as amended, reworded, and clarified iu Sectiou 3 (Membership), and Sections 1 (County Societies), 2 (Charter), 4 (Custody of Charter), 5 (Constitution and By-Laws), 6 (Function and Duties of Component Societies), 7 (Records), and 8 (Certificatiou of Delegates) as originally submitted.

Chapter XII (Parliamentary Procedure) was adopted as originally submitted.

Chapter XIII (Amendmeut of By-Laws) was adopted as origiually submitted.

Chapter XIV (Repeal of previous By-Laws) was adopted upou being read as amended, reworded and clarified.

This completed the action ou the By-Laws and Dr. Aisenstadt moved that the entire set of By-Laws as amended, reworded aud clarified be adopted. However, before a vote was taken, Dr. Fulton was recoguized by the Speaker, and Dr. Fulton moved, followed by a second by Dr. J. A. Walker, that before action be taken on Dr. Aisenstadt's motion, the delegates recousider the amendmeut offered by Dr. Cook to Chapter V, Section 3 (Time of Election). A vote ou this motion was sustained and Dr. Cook was recoguized to make an amendment to his previous amendment. Both amendments carried and the Speaker next put the motion of Dr. Aisenstadt (which was seconded by Dr. Ritzhaupt) to a vote. The motion carried.

The next order of business was the report of the Resolutions Committee, read by Dr. H. K. Speed, Chairman. The Committee reported favorably on the Third Party Lien Law resolution adopted by the Tulsa County Medical Society and submitted to the House of Delegates for action. The resolution from the Muskogee County Medical Society on medical education was not adopted, and the resolution from the Muskogee County Medical Society favoring the adoption of the quarter system of instruction at the University of Oklahoma School of Medicine was referred to the Committee ou Medical Educatiou. The resolution of the Oklahoma County Medical Association regarding the intangible property tax law was reported on uufavorably by the Resolutions Committee and was not adopted. The resolution concerning the practice of cliuical pathology introduced by Dr. A. S. Risser was reported on favorably by the Committee and was adopted. (All of these resolutious will be printed in full in the August issue of The Journal.)

The Speaker next recoguized Dr. P. M. McNeill, who moved, seconded by Dr. Haynie, that the House next cousider the election of officers. The motion carried and the Speaker informed the House that under the new Constitutiou, a Vice-President would have to be elected, but that at this time the chair would only receive nomiuatious for President-Elect.

Dr. Speed was recognized and placed in nomiuation the name of Dr. Finis W. Ewing of Muskogee. The Speaker called for other uominations and then recognized Dr. W. S. Larrabee who made the motion, seconded by Dr. J. G. Edwards, that the nominations be closed aud all votes cast for Dr. Ewing. The motion carried uuanimously and Dr. Ewing was declared elected.

The Speaker uext asked for nominations for Vice-President. Dr. T. H. McCarley nominated Dr. W. A. Tolleson and, upou hearing no other nominations, the Speaker recoguized Dr. Ned R. Smith who moved, with a secoud by Dr. O. E. Templiu, that the nominations cease aud a unanimous ballot be cast for Dr. Tolleson. The motion carried and Dr. Tollesou was declared elected.

Upon completiou of the election of a President-Elect and a Vice-President, the Speaker aunounced that there would be uo election for the office of Secretary-Treasurer-Editor, as Dr. Willour's term of office had another year to ruu. The Speaker then requested that the Vice-Speaker, Dr. P. P. Nesbitt take the chair. Dr. Nesbitt asked for nominations for Speaker of the House of Delegates. Dr. Shade Neely nominated Dr. J. D. Osborn. Upon hearing no other nominatious, the Vice-Speaker recognized Dr. Aisenstadt, who moved, with a second by Dr. Risser, that a unauimous ballot be cast for Dr. Osborn. The motion carried and Dr. Osborn was declared elected.

The Speaker next requested nominations for Vice-Speaker of the House of Delegates, and the name of Dr. Nesbitt was offered by Dr. Willour. Dr. H. K. Speed moved, seconded by Dr. McLain Rogers, that Dr. Nesbitt be unanimously elected. The motion carried and Dr. Nesbitt was declared elected.

Upon election of these officers, the Speaker announced there would be a short recess in which the delegates from those districts whose couucilors' terms were expiriug might elect councilors. He pointed out that Dr. Ewing's place would have to be filled in that district.

After calliug the House to order again, the Speaker was informed aud so annouuced that the delegates from district one had reelected Dr. O. E. Templiu, and that the delegates from district eight had elected Dr. Shade Neely to fill the unexpired term of Dr. Ewing.

The next order of business was the electiou of a delegate to the American Medical Associatiou. The names of Dr. W. A. Howard aud Dr. W. Albert Cook were placed iu nomination. A written ballot was taken and Dr. Howard was declared elected by a vote of 42 to 26.

At this point, Dr. Claude Chambers asked for the privilege of the floor in order to introduce Mr. Lloyd Noble of Ardmore, president of the State Board of Regents, who had flown from Ardmore at the request of Dr. Chambers to appear before the House. The Speaker expressed pleasure in granting the floor to Dr. Chambers for the introduction, and upon being introduced, Mr. Noble expressed his gratitude in being present and made a few pertinent remarks relative to the work of the Board and the advantage of having a member of the medical profession as a member of the Board, since a great deal of their work had to do with

the medical school, University Hospital and the Crippled Children's Hospital. The Speaker thanked Mr. Noble on behalf of the House of Delegates for his remarks and the time he had taken from his business to make the trip.

The Speaker then announced that the chair would entertain motions for the next meeting place of the Association. Dr. George Garrison of Oklahoma City was recognized and extended an invitation to the Association to meet in 1941 in Oklahoma City. The Speaker thanked Dr. Garrison for the invitation, and the House of Delegates unanimously voted to meet in Oklahoma City.

Following this action, Dr. W. A. Howard, the newly elected delegate to the American Medical Association, was accorded the floor and expressed his appreciation and gratitude for the honor accorded him, as well as the cooperation he had received during his term of office as president.

The meeting was adjourned at 11:25 a. m. to meet the next morning at 8 a. m.

WEDNESDAY, MAY 8

The House of Delegates was called to order by the Speaker, Dr. Osborn, at 8:45 a. m. Dr. Willour moved and Dr. C. H. Haralson seconded, that since a quorum obviously was present, the roll call be dispensed with. The motion carried. The Speaker then stated that the Articles of Incorporation of the Association would have to be amended to conform with the new Constitution and By-Laws that had been adopted. After a short discussion, Dr. Risser moved, Dr. Ewing seconded, that the Executive Secretary, with the advice and assistance of legal counsel, be empowered to alter the wording of the Articles of Incorporation to conform to the new Constitution and By-Laws.

The next order of business was the reading of the proposed budget for the coming year. The report was read by Dr. Willour, the Secretary-Treasurer, and upon a motion by Dr. Willour with a second by Dr. Haralson, the budget was adopted as read. Dr. Willour, then stated that Dr. Turner, the new President of the Association, had asked that $2,000.00 be set up in the budget for the continuance of Post-Graduate Teaching for the years 1941-42, and that the request was from the Committee on Post-Graduate Teaching, of which Dr. Turner was chairman. Dr. Willour moved, and Dr. Larrabee seconded, that the request be granted. The motion carried.

The Speaker next recognized Dr. John L. Holland of Madill, who read a paper entitled, "The Relation of the Medical Profession to the Public, and a Look at the Obligated Politician."

At the conclusion of the paper, the Speaker called for the report of the Necrology Committee. The Chairman, Dr. P. H. Anderson, read the report, eulogizing the members of the Association who had passed away during the past year. It was then moved by Dr. Anderson and seconded by Dr. Templin that a copy of this action be sent to the families of the deceased doctors.

The Speaker next read the names of the doctors submitted by the various county societies for honorary membership. (These names appeared in the April issue of The Journal). At the conclusion of the reading of the names, Dr. Willour moved, and Dr. Risser seconded the motion, that these members be elected to honorary membership, subject to scrutiny of their qualifications.

Upon concluding this business, the Speaker informed the delegates that the Resolutions Committee was bringing to the floor another resolution, and since there would of necessity be a litle delay he would recognize Dr. Risser, who desired to introduce Mr. Walter R. McBee, Director of Group Hospital Service, to the House of Delegates. Mr. McBee spoke briefly to the House. His remarks brought out the facts that the State Association had taken the leadership in the formation of Group Hospital Service and that it was the only plan in operation in Oklahoma having the approval of the Medical and Hospital Associations, and that while at the present time operations were being conducted only in Tulsa and Oklahoma City, as soon as possible the rural areas likewise would be serviced. Mr. McBee also invited all those interested to call at the office and all questions concerning the organization would be gladly answered.

At the conclusion of Mr. McBee's remarks, the Speaker informed the House that the Resolutions Committee was ready to report and recognized Dr. Speed, Chairman. Dr. Speed read a resolution to the effect that the Oklahoma State Medical Association was vitally interested in the welfare and progress of the University of Oklahoma School of Medicine, and desired to go on record requesting that future legislatures of the State of Oklahoma make adequate appropriations for the school in order to keep abreast of the progress of medical education, and that a copy of the resolution be sent to the Governor of the State, as well as to the President pro tem of the Senate and the Speaker of the House of Representatives. Dr. Speed moved and Dr. Willour seconded the adoption of the resolution which carried unanimously.

Dr. Speed then requested further indulgence of the House of Delegates and read a second resolution thanking the Tulsa County Medical Society for their splendid handling of the largest state medical meeting ever held in Oklahoma. The resolution carried unanimously.

The Speaker then announced that he would entertain a motion to adjourn. Dr. Willour made the motion, which was seconded by Dr. R. M. Anderson, that the House stand adjourned. The motion carried and the Speaker declared the House adjourned.

Council Meeting

MAY 6, 1940

The first meeting of the Council of the Association during the 1940 Annual Meeting convened at 3:30 p. m., May 6 in the Mayo Hotel, Tulsa, with President W. A. Howard presiding.

At the request of the Council, Mr. Graham, the Executive Secretary, read the minutes of the last Council meeting, and they were approved as read.

The next order of business was the reading of communications received at the office of the Association requiring Council action. All communications were referred to committees for answering, or the answers directed.

President Howard next requested the reading of the proposed budget for the ensuing year. All entries were discussed by the Council and the budget adopted.

In response to President Howard's request for presentation of any other new business that required the action of the Council, Mr. Graham spoke on the request of Mr. Mott Keys, secretary of the Insurance Fund, for assistance in straightening out the situation relative to the Fund's accounts with the doctors of the state and, after additional remarks by Dr. P. M. McNeill, Dr. J. A. Walker moved that the President appoint a committee of three to confer with Mr. Keys on the matter. The motion carried.

Following this business, the President appointed Dr. McNeill, Dr. James Stevenson and Dr. L. C. Kuyrkendall as a committee to review the audit of the Association's books. He also appointed a committee to study the income tax problem, said committee being Dr. Finis W. Ewing, Dr. V. C. Tisdal and Dr. A. S. Risser. The committees were instructed to report at the next Council meeting.

The President, at this point of the meeting, discussed the advisability of selling the United States Government Bonds of the Association while a premium could be realized, and buying back in Baby Bonds. After a general discussion, it was moved by Dr. O. E. Templin and seconded by Dr. J. A. Walker that the bonds of the Medical Defense Fund be sold and, together with the surplus, be reinvested immediately in Baby Bonds.

Following this discussion, the Council discussed the recommendation of the auditor that the funds of the

Association be moved to Oklahoma City. Dr. Willour pointed out that no doubt the Council would approve the report of the auditor and since this recommendation was in the report, no action was necessary at this time.

The President next requested that the Council approve the bonding of the Executive Secretary and the employees of his office in the amount of $2,500.00, since it was poor business not to have this coverage. Dr. Willour moved and Dr. Risser seconded the motion that this action be approved. The motion carried.

Dr. Risser was next recognized by the Chair and requested as chairman of the Insurance Committee that, since their work was completed and Group Hospital Service was in operation, the committee be dismissed. On the motion of Dr. Ewing, seconded by Dr. O. E. Templin, the committee was discharged with the full appreciation of the Council for its fine work.

The next order of business discussed was the honorary membership of Dr. W. H. Freeman. This matter was referred to Dr. V. C. Tisdal, Councilor of the district in which Dr. Freeman resides, for investigation.

Discussion was taken up on the matter of penalties assessable on membership after February 1. On the motion of Dr. Willour, seconded by Dr. L. C. Kuyrkendall, it was voted to extend the penalty date to April 1. Further discussion was then given to the payment of dues, and the suggestion that members not be allowed to drop out one year and come back in the next without paying up of back dues was made. On the motion of Dr. Willour, seconded by Dr. Kuyrkendall, it was recommended that this suggestion be made in the President's report to the House of Delegates.

There being no other new business at this time, the Council adjourned to reconvene the following morning at the close of the House of Delegates meeting.

MAY 7, 1940

The Council convened in the French Room of the Mayo Hotel in Tulsa at 11:30 a. m., with President Howard presiding.

All members of the Council were present, and President Howard's opening remarks concerned the selling of the Bonds as soon as possible, since the issues had dropped fifty cents since the day before.

The first order of business was the report of the Auditing Committee. The Committee reported favorably on moving the accounts of the Association to Oklahoma City, the employment of a firm of accountants to audit the books each month so long as this service could be had without additional cost, and that the bond covering the Secretary-Treasurer-Editor be included in the blanket bond covering the other employees of the Association. Dr. P. M. McNeill spoke briefly on the report of the committee, and the advisability of retaining an auditing firm. On motion of Dr. J. A. Walker, seconded by Dr. O. E. Templin, the committee report was accepted.

The President then called for the report of the committee studying the income tax case. Dr. Ewing, chairman of the committee, made the committee reports, which recommended that the President execute the necessary documents and transmit them to the proper governmental agency. The committee further recommended that the Articles of Incorporation be amended to conform to the present needs of the Association. Dr. J. A. Walker moved, and Dr. A. S. Risser seconded that the report be accepted. The motion carried.

The Council next approved the bill rendered by Mr. Glenn Davis, the auditor, and voted to expend $100.00 for the printing of the newly adopted Constitution and By-Laws.

The next order of business concerned the salary of the Executive Secretary. Drs. Tisdal, Turner, Willour and Fulton spoke on the advisability of raising the salary, all concurring that a raise was in order. The Council then voted unanimously to raise the salary of the Executive Secretary $25.00 per month, and that this amount be added to the budget.

Discussion was next held as to the bank in Oklahoma City to which the account of the Association was to be transferred. At the conclusion of the discussion, the Council approved the recommendation of the President that the Liberty National Bank be made the depository.

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*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

JOHN WYETH & BROTHER, INCORPORATED, PHILADELPHIA, PA.

ASSOCIATION ACTIVITIES

A. M. A. 1940 Session Sets New Attendance Record

New York City became the medical capital of the world early in June when the first advance guard of physicians began to register at the various hotels for attendance on a number of meetings of special societies which usually are held just before the annual session of the American Medical Association, The Journal of the Association reports. With each day more and more physicians, accompanied frequently by members of their families, poured into the city. By Friday June 14, 12,864 physicians had registered their attendance on the annual session, exceeding by more than 2,500 the largest number ever previously registered in any session. The largest previously was the Atlantic City session at which the Canadian physicians also were in attendance. Physicians filled the lobbies of the hotels, thronged the scientific exhibits, were interviewed by one exhibitor after another in the Technical Exhibits, collected vast amounts of information and samples, applauded the Governor and the Mayor of New York at the opening session, participated in innumerable social events, theater parties and radio broadcasts, and found time for an occasional hour at the World's Fair. Replete with information and entertainment and somewhat exhausted by the drive necessary to get the most out of a meeting of this kind, they began to depart toward the end of the week, expressing universal satisfaction in what they had gained at the meeting.

"The problems that concerned the House of Delegates at this annual session were solved with a perspicacity and unanimity that were in themselves remarkable and yet indicative of the manner in which the medical profession is united today in solving its problems," The Journal said. "Most significant was unquestionably the action taken with regard to medical preparedness. The Committee on Medical Preparedness was formed, including ten members of the House of Delegates and five officials of the Association, and is already in action trying to do all that the medical profession can do to place our country in a position to resist any aggression that may come upon us."

The new officers elected include the President-Elect, Dr. Frank H. Lahey, and a new trustee to succeed the late Dr. Charles Benjamin Wright; namely, Dr. William F. Braasch of Rochester, Minn. San Francisco was chosen as the place of the annual session of 1943.

On four floors of the Grand Central Palace the largest technical and scientific exhibits ever assembled were besieged by great numbers of physicians. Many of the technical exhibitors had prepared new installations of equipment especially for this occasion. A sympathetic gesture was the decision at the end of the session to present surplus supplies to the French War Relief. The Scientific Exhibits subsidized by the American Medical Association served a most useful purpose in graduate education; the individual exhibits surpassed in quality and in interest any similar collection available at any time in this country. Many a visitor to the annual session feels that he gains the utmost in graduate education from these exhibits.

The opening meeting of the annual session was held in the Grand Ballroom of the Waldorf-Astoria. This magnificent hall was packed to the doors and hundreds stood throughout the meeting. The Doctors' Symphony Orchestra, composed of physicians and related professional workers of New York, gave a demonstration of musical competence equal to that of many of the best professional aggregations. The Governor of New York brought the audience to its feet with a stirring appeal for medical cooperation in the maintenance of our democracy and told the assembled physicians that they were the ones to solve the problems of medical care for the American people. The Mayor of New York City, who had flown from Ottawa specifically for this occasion, told of his admiration for medical service and invited the physicians in attendance to visit the medical institutions of New York.

"The general sessions of the Association, the round-table conferences and all the meetings of the various sections were heavily attended, and the discussions were exceptional.

"In the arrangements for the annual session of 1940 the Medical Society of the County of New York and the Medical Society of the State of New York gave complete and valuable cooperation," the editorial stated. "The radio program from this annual session was the largest ever attempted, including numerous broadcasts from local stations as well as on the national chains. The newspapers of New York, overwhelmed by the news of the war, nevertheless gave pages on some days and many columns on others to the news of the annual session. No doubt the success of this great session will stimulate the authorities of New York City, the hotel owners and the Convention Bureau to set in motion the necessary steps to provide that great metropolis with a convention hall adequate to the needs of an annual session of this type. In attendance, in quality and in every other way, it set a mark for scientific meetings."

Dr. Moorman New President of American Trudeau Society

Recognition of his work in eradication of tuberculosis through local, state and national activities over the past twenty-five years was accorded Dr. L. J. Moorman of Oklahoma City in June when he was inducted as active President of the American Trudeau Society. Dr. Moormau was installed into the office at the annual meeting of the National Tuberculosis Association and the American Trudeau Society, the latter group being the physicians' and tuberculosis specialists' organization, in Cleveland, Ohio.

The American Trudeau Society, following a change in name from the "American Sanatorium Association," now takes in memberships from any physician interested particularly in tuberculosis, thus expanding its usefulness in keeping with more attention to tuberculosis by physicians in private practice.

Among other Oklahomans attending the meeting were Dr. R. M. Shepard of Tulsa, Dr. Richard M. Burke and Dr. Paul B. Lingenfelter of Clinton, and Dr. Carl Puckett of Oklahoma City.

Dr. R. J. Reichert of Moore, accompanied by Mrs. Reichert and their daughter, Marilyn, spent the month of June in Chicago, where Dr. Reichert took post-graduate work at the Cook County Hospital.

Dr. M. L. Saddoris of Cleveland, Okla., has been named president of the Cleveland senior chamber of commerce.

Dr. John H. Walker of Muskogee, with Mrs. Walker, spent a short time in early June in Boston, Mass., and Newport, R. I. While in Boston, Dr. Walker attended a reunion of the class of 1930 at Harvard Medical School.

Cigarette information worth knowing*

Philip Morris do not claim to cure irritation but they do say this:

62.3% of the cases of irritation of the nose and throat due to smoking cleared completely on changing to Philip Morris.

37.7% the balance, showed definite improvement.

100% benefited

**From tests reported by Laryngoscope, Feb. 1935. Vol. XLV, No. 2, 149-154*

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News From The State Health Department

The science of preventive medicine, as practiced today by public health departments, had its American beginning in March, 1647, when the General Court of Massachusetts Bay Colony provided for a maritime quarantine against ships from the West Indies, where one of the periodic epidemics of yellow fever was raging.

After a period when local governments undertook meager methods of disease control, the movement for state health departments started, in 1869, also in Massachusetts. The central control of state health activities is conceded to be a desirable administrative procedure, with the power over the public health being almost entirely delegated to local authorities.

The next major development in public health is of comparatively recent origin, and is still in process of development. It is the full-time, county health department. The first department of this type is reported to have been organized in Jefferson County, Kentucky, in 1908, and is still in operation. The second county department was in Guilford County, North Carolina, in June, 1911. A month later a similar unit was established in Yakima County, Washington.

Since that time the growth of the county health movement has been steady, due largely to stimulation from the United States Public Health Service, state health departments and other agencies.

In 1921 there were 186 county health departments; in 1926 the number totaled 347 and in 1931 there were 610 such units in 36 states. The figures for 1938 showed 1,000 health departments serving the 2,800 or more counties in the United States.

Systematic organization of county health departments in Oklahoma is a relatively young procedure, the work having started in 1933, with 29 of the state's 77 counties having local health service on a full-time basis in 1939.

Because of its newness to many Oklahomans, the county health department program has been the subject of many erroneous beliefs, which often led to misunderstandings.

A public health department is in reality a cooperative effort among local governmental agencies, the medical and dental professions and interested citizens, to provide better health conditions in the area where it works.

Finances for its operation are provided by the local governing body, and the state health department and the federal government.

Public health is two-sided in its benefits, proving its value to the community from both a financial and a humanitarian viewpoint.

The work of the health department staff is well formulated and definite, with emphasis only on the preventive side of medicine. The personnel might well be likened to instructors in health, advising, helping all groups into ways of healthier living.

Every activity of the health department is directed at close cooperation with the private physician, as the guardian of the citizen's health. The constant advice is "go to your doctor early, and regularly."

Duties of each staff member are well defined. In briefest form, the medical director does the following: formulates policies; performs routine administrative tasks; directs public health education; conducts preschool and school examinations; makes epidemiological investigations; cooperates with civic organizations; has the power of quarantine; conducts venereal disease clinics; directs all activities.

The nurse does the following: teaches control and prevention of communicable disease; encourages venereal disease patients to continue treatment; instructs expectant mothers in maternal hygiene and infant care; interprets results of school examinations to parents; conducts organized classes in home hygiene, first aid, nutrition, prenatal and postnatal care; teaches families to live hygienically; assists the doctor with all physical examinations; assists doctor in immunization clinics; encourages home sanitation.

The sanitarian does the following: assists the doctor in epidemiological investigations; samples public and private water supplies for bacteriological examinations; inspects school water supplies; excreta disposal, lighting, ventilation, lavatory and lunching facilities; consults with plant managers regarding industrial hygiene problems; supervises municipal milk control; supervises dairies not under municipal ordinance; prepares maps, graphs and exhibit materials; inspects swimming pool sanitary facilities.

The clerk does the following: functions as stenographer and typist; collects and tabulates vital statistics; keeps office records; operates filing system; prepares report forms; orders supplies.

Close cooperation is maintained with the medical profession, the health department confining its activities to preventive practice.

However, the health department, through its many clinics, investigations and visits, will find cases needing curative work. In such cases, every effort is made to bring this person under the care of a private physician.

The public health program is a nine point endeavor, covering communicable diseases; venereal diseases; tuberculosis; maternal and infant care; vital statistics; infant and pre-school hygiene; school hygiene; sanitation and food and milk control.

In each field of work it is the goal of the public health worker to find the cases needing attention, get them to take measures for correction, and then to prevent further occurrence by stopping the source.

Public health thus becomes the ally of the physician, finding those who need his attention, educating them to go to the private physician, and removing the source of difficulty.

"A Good Slogan For a Bad Remedy"

"Advocates of social theories have learned that a slogan is worth a thousand words of argument and many volumes of facts in selling ideas. Thus the phrase 'socialized medicine' is being urged in the attack on the private practice of medicine," *The Journal of the American Medical Association* declares.

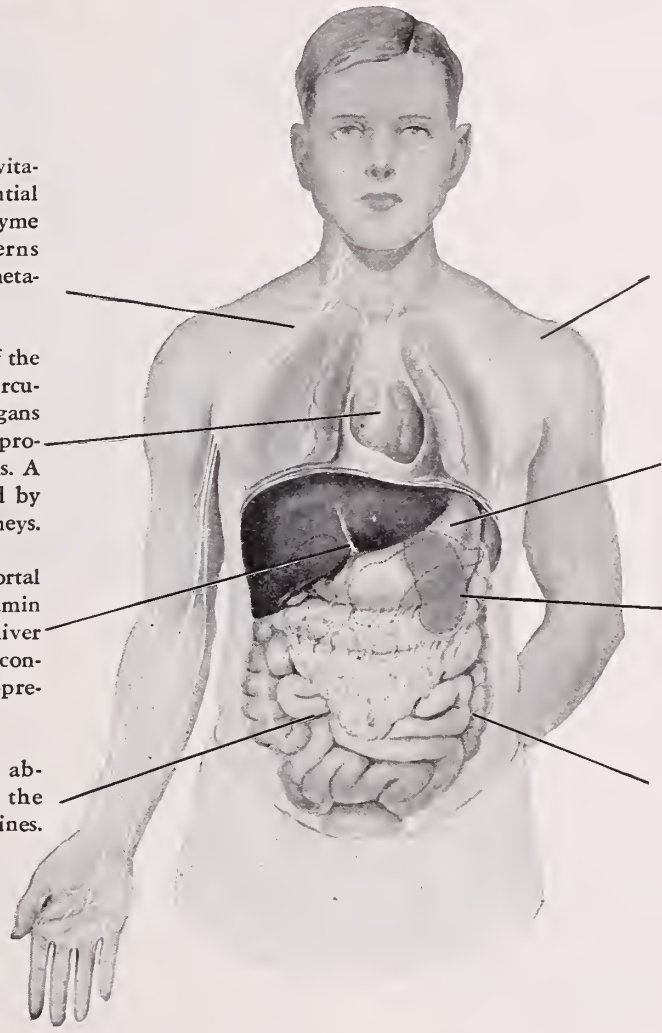
"The term is almost perfectly indefinite; it may mean almost anything in the field of medicine that the listener wants it to mean. Defined as properly used in the social sciences, the term can refer only to such medical services as can be helpfully applied to the whole population, are supported by public funds and are properly administered by public authorities. Illustrations would be confined largely to public health and institutional care. This is not, however, what is meant by those who use the slogan. Such services are not, of course, opposed by organized medicine. On the contrary, they have been created and are maintained largely by the organized medical profession.

"The 'goods' which this slogan seeks to sell are really compulsory sickness insurance. This has been found difficult to sell under its original label. Like most quack remedies, it is advertised as a panacea with careful concealment of its actual content and little demonstration of tested results where applied. Many centuries of sad experience with medical panaceas have made physicians suspicious of social ones. Like medical cure-alls, the panacea of compulsory health insurance has failed to produce promised results. Panaceas and slogans are not needed to meet the difficulties in the distribution of the cost of medical care.

STUDIES IN THE AVITAMINOSES



This page is the seventh of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the June 22 issue of The Journal of the American Medical Association.



(4) In nerve tissue, vitamin B_1 is an essential component of an enzyme system which governs one phase of the metabolic process.

(3) The remainder of the vitamin enters the circulation, the various organs removing thiamin in proportion to their needs. A large amount is used by heart, liver, and kidneys.

(2) By way of the portal circulation the vitamin is carried to the liver which under normal conditions retains an appreciable amount.

(1) Vitamin B_1 is absorbed from both the large and small intestines.

(5) In skeletal muscle, vitamin B_1 also forms a part of an essential enzyme system governing a phase of the oxidative process.

(6) The secretory and motor function of the stomach may be affected by involvement of the gastric nervous mechanism as a result of B_1 deficiency. This may account for the anorexia in this condition.

(7) If excessive quantities of vitamin B_1 are ingested and absorbed, they are not stored for future use but are excreted by the kidneys; during periods of diuresis considerable quantities of the vitamin may be lost.

(8) Vitamin B_1 found in the feces is largely the result of bacterial growth. Coprophagy provides a source of B_1 for some species of animals.

The Metabolic Fate of Vitamin B_1

In the tissues, vitamin B_1 is an essential part of an enzyme system governing one phase of cellular metabolism. Vitamin B_1 appears to be converted to co-carboxylase, which is essential for the oxidation of pyruvic acid, one of the intermediary products of carbohydrate metabolism.

UPJOHN

Southern State Medical Group Meets in Chickasha

Explanation of the use of sulfanilamide and its derivatives in the treatment of pneumonia and related cases by Dr. Walter Reddica, Dallas internist and staff member of the Baylor University Medical School, highlighted the meeting of the Southern Oklahoma Medical Association at Chickasha in June. An interesting paper was read by Dr. A. I. Folsom of Dallas, urologist and also a member of the medical school staff.

During a dinner in the evening at the Chickasha Country Club, doctors and their wives were entertained by dancing school pupils.

The meeting opened at 2 p. m. in the afternoon of June 6, continuing into the evening. Wives of the visiting doctors were entertained by the ladies auxiliary of the Grady County Medical Society.

Opportunities For Practice

The Journal has beeu advised of a number of openings for practice, which are as follows:

Mr. W. R. Fulton, Superintendent of the Hammou Public School, Hammon, Oklahoma, has advised that there is an opening for a young physician to enter practice in that town (population, 800) and surrounding farm territory.

Au opportunity for practice exists in Roosevelt, Oklahoma. Anyone interested should communicate with Mr. John B. Dover. Rexall Drug Store, Roosevelt, Okla.

Dr. Mark F. Boyd, Director, Station for Malaria Research at Tallahassee, Florida, operated under the Rockefeller Foundation of New York, is anxious to obtain the services of a young physiciau. The successful applicant would live at the Florida State Hospital at Chattahoochee, where living quarters are provided. The salary is $2,000 per year, plus quarters. An allowance of $30 per month also is given for the maintenance and operation of an automobile required in the daily trips between the hospital and the laboratory. A satisfactory performance of duty would lead to annual increases at the rate of ten per cent. Dr. Boyd also states that the State Board of Medical Examiners of Florida has waived the requirements that the physician appointed should take the examination of the Medical Board of Licensure. Anyone interested should communicate with Dr. Mark F. Boyd, P. O. Box 997, Tallahassee, Florida.

Notice of an opening has been received from Dr. V. G. Logan, county physician and health officer, American Falls, Idaho. The notice stated: "Wauted, young married man. Protestant, as an assistant in Idaho, small town. Salary, $175 to start. Must be able to do some surgery, appendectomy and tonsillectomy. Have excellent small hospital, all graduate nurses. Character one of first considerations, as well as personality. Practically all work (95%) is done in the office or hospital. Send photograph."

An opportunity for practice exists for a young physician in Seiling, Oklahoma, population 850. Anyone interested should contact Mr. H. S. Bivens of that town.

Services of A. M. A. Constantly Increasing, Reports Show

The constantly increasiug service of the American Medical Association to the public and to medicine is revealed in the reports of officers of the Association, published in the May 11 issue of The Journal of the Association. The organization's by-laws provide that such reports must be published one month in advance of the annual meeting, which this year was held in New York June 10-14.

Evidence of the solidarity of the medical profession is contained in the membership figures. The secretary reports that as of March 1, 1940, there were 115,381 members, a gain of 3,171 over the total of the previous year. During the past three years, a period in which the Association has been the object of extensive attacks, including a federal indictment, the membership has shown a total gain of 9,921.

A total of seventy-one grants in aid of research were made in 1939 by the Association. Thirty-seven, made by the Committee on Scientific Research, included investigations into the chemical changes in heart muscle, high blood pressure, tuberculosis, brain injuries, food poisoning, gastric and duodenal ulcers, bone marrow, vitamin C requirements of man, sex hormones and studies of the blood.

Twenty-nine grants, made by the Committee on Therapeutic Research of the Council on Pharmacy and Chemistry, included assistance in research on whooping cough, local anesthetics, sulfapyridine and malaria. The Committee on Research of the Council on Physical Therapy made five grants, which gave assistance for experimental work in such fields as the effect of heat in bone and joint repair.

The net cost of publication of seven special journals published by the Association, of Hygeia, The Health Magazine and of the Quarterly Cumulative Index Medicus, which is an index of the best medical literature of the world, exceeded income received by the sum of $75,947. The index is recognized as a distinct contribution to scientific medicine.

The activities of the Association in promoting the health of the people through sound health education are reflected to some extent in the report on Hygeia. The total circulation of the magazine was in excess of 110,000, a net paid increase of 7,588 over that of the year before. Gains in circulation also are reported for The Journal of the Association and the special-journals.

The library of the Association distributed 2,993 library packages and lent 12,714 periodicals. Bibliographic aid was given in response to 6,000 requests and the facilities of the library were utilized by 1,545 visitors during the year.

Among the important activities of the Council on Pharmacy and Chemistry were investigations in its laboratory of the properties aud uses of sulfanilamide and sulfapyridine, standards for the latter being established during the year. The report points out that under the new federal Food, Drug and Cosmetic Act, "the proper agencies of the federal government will no doubt deal effectively with mislabeled products but it is not within the purview of such agencies to determine whether or not a drug is a worth while addition to

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All Squibb Pollen Extracts are glycerol solutions and retain their potency for more than 18 months. They are available in a variety of dosage forms to suit the needs of individual patients.

Use *Ragweeds Combined* for late Summer and early Fall Hay Fever. "Ragweeds Combined" Squibb Pollen Extract contains equal parts of giant and dwarf ragweed.

[1] Cooke, R. A., and Stull, A.: *J. Allergy* 4:87, 1933 and previous papers.

"Ragweeds Combined" Available in These Convenient, Economical Packages

Package	Contents	Total Protein Nitrogen units Supplied	Advantages
Three-Vial Package	Three—3.5-cc. vials—containing 100, 1000, and 10,000 protein nitrogen units per cc. respectively.	**38,850**	1—Convenience—no diluting or mixing necessary. 2—Economy—enough material for from 15 to 19 doses for one patient. 3—Flexibility of dosage—dosage may be adjusted to suit individual requirements.
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materia medica and it is therefore highly important that the profession give whole-hearted support to the work of the Council.'' The report again emphasizes that members of the Council serve without any remuneration. No fee or payments of any sort is required or accepted from anyone who submits products for official consideration by the Council.

During the year the Council on Foods continued to increase its service to the public and the profession in the field of foods and nutrition. Among its principal activities were investigations and reports on the need for the addition of vitamin B1 to staple foods, the loss of vitamin C in orange juice on standing, vitamin mixtures, claims for food products rich in certain vitamins, lead in foods, the flourine content of foods and the fortification of foods with vitamins and minerals.

Investigations in the fields of audiometers and hearing aids, inhalators and resuscitators, ''fever treatment'' apparatuses and radio interference said to be caused by electromedical equipment, were among the activities of the Council on Physical Therapy.

An educational campaign is being conducted by the Council on Industrial Health, features of which include the Annual Congress on Industrial Health sponsored by the Council.

The increasing effectiveness of the Association's work in furthering the high standards of medical education for students as well as postgraduate education for the practicing physician, is reflected in the report of the Council on Medical Education and Hospitals.

Another index to the service of the Association to the general public as well as to the profession is contained in the report of the Bureau of Health Education. During the year the Bureau handled 19,660 pieces of mail, in the course of which it answered more than 10,000 letters from laymen. It also received a large volume of mail from listeners to the Association's radio program, ''Medicine in the News,'' broadcast by the National Broadcasting Company for thirty weeks during the winter months under the direction of the Bureau.

Studies and reports on arrangements for the distribution of medical care and on group hospitalization plans were among the activities of the Bureau of Medical Economics. It reports that at present at least fourteen state medical societies have statewide arrangements for medical care in various stages of development or operation and that at the close of 1939 there were 108 group hospitalization organizations in operation in thirty-five states and in the District of Columbia.

The Bureau of Investigation continued to increase the amount of information furnished on ''patent medicines,'' charlatans and frauds to physicians, laymen, government agencies, better business bureaus, business corporations, newspapers, radio stations and other groups.

In addition to the scientific exhibits at the annual session of the Association, the Bureau of Exhibits reports that in 1939, 200 exhibits were shown in various cities in the United States and Canada in addition to those being maintained at the New York World's Fair and the Golden Gate International Exposition. Its other activities include motion pictures for the use of medical and other scientific groups.

Other of the other regular activities of the Association are described in the reports of the Council on Scientific Assembly, the body which arranges the scientific programs for the annual sessions of the Association, and the Bureau of Legal Medicine and Legislation.

Some of the special activities involve the Committee on Air Conditioning, the Committee to Study Problems of Motor Vehicle Accidents, and the Advisory Committee on Advertising of Cosmetics and Soaps. Evidence of the effectiveness of the work of the latter, its report says, is that those concerns whose products had previously been passed on by the committee found little difficulty in meeting the new federal regulations on cosmetics.

Syphilis Treatment Data Asked By Social Hygiene Society

Asked By Social Hygiene Society.

In order that there may be a central source of information with regard to studies of the intravenous drip method of treatment of syphilis (''the five day treatment''), the American Social Hygiene Association at 50 West 50th Street, New York, has been asked to gather and to keep available information regarding this subject. The Association requests all physicians and hospitals which are planning or are now carrying on studies of experiments with this method of treatment of syphilis to send brief information regarding the following points to the Association at the above address:

1. Name of hospital or other institution.
2. Name of principal physician in charge of the intravenous drip study.
3. Type of case or cases of syphilis treated by the intravenous drip method.
4. Name of drug or drugs used.
 (a) By the intravenous drip method.
 (b) By any other method before, during or after intravenous drip therapy. (Mention any specific therapy used.)
5. Routine laboratory work done on cases of syphilis treated by the intravenous drip method.
6. Usual number of hours of intravenous drip treatment per day per patient.
7. Usual number of days of intravenous drip treatment per patient.
8. Any other pertinent facts.

The Association will be glad, so far as possible, to answer inquiries regarding the intravenous drip treatment of syphilis. The Association has available to physicians, upon request, a brief pamphlet on the subject of the present status of the intravenous drip method of treatment of syphilis, written by Dr. Charles Walter Clarke, Executive Director of the Association and a member of the New York City Committee on the Intravenous Drip Treatment of Syphilis.

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Typhoid Deaths in Large Cities Drop

Typhoid deaths in the niuety-three largest cities of the United States dropped from 291 in 1938 to 265 in 1939, thus continuing the consistent downward trend in the mortality rate from this disease during recent years, The Journal of the American Medical Association declares in its twenty-eighth annual report of typhoid deaths.

The 1939 rate per hundred thousand of populatiou was 0.67 as compared with 0.74 iu 1938. Thirty-four cities reported no death from typhoid, an increase of five over the previous year.

Recent typhoid death rates represented a tremendous improvement over those of the early part of the century. Iu 1910 the rate for seventy-eight of the ninety-three cities included in the present report was 20.54 and in 1915 it was 9.47. However, by 1920 it had dropped to 3.85, and the rate at five year intervals thereafter were 3.44, 1.61 and 0.98, respectively. The rate for these same seveuty-eight cities in 1939 was 0.65.

Figures for the report were obtained from local health officers, who were asked to furnish au estimate of the population aud to give the number of deaths from typhoid among both resideuts and nonresidents. Paratyphoid A, which is closely related to typhoid, was not included in this study.

Bridgeport, Conn., now heads the honor list with no death in six years. Fort Wayne, Ind., has had none in five years; South Bend, Ind., and Utica, N. Y., none in four years, and Fall River and Lynn, Mass., Milwaukee, Wis., New Bedford, Conn., and Wichita, Kan., noue in three years. Others with no deaths in 1938 or 1939 were Cambridge, Mass., Elizabeth, N. J., Lowell, Mass., Kansas City, Kan., and Salt Lake City.

New York and Chicago, with 0.3 deaths per hundred thousand population, had the lowest rates among the nation's eight largest cities. Los Angeles had a rate of 0.4, Detroit 0.5, Cleveland 0.5, Philadelphia 0.6, St. Louis 0.7 and Baltimore 0.7. However, the last four cities reported that one-third or more of the deaths within their limits were of nouresidents. Since many large cities furnish hospital facilities for the surrounding rural communities, the hospitalization of non-residents is responsible in many instances for raising appreciably the number of deaths attributed to these cities.

Cities of the New England states had the lowest rate, 0.23, representing six deaths as compared to twelve in 1938. Other groups of cities rauk as follows: Middle Atlantic cities (in New York, New Jersey and Penusylvania) 0.37, East North Central cities (Illinois, Indiana, Wisconsin, Ohio and Michigan) 0.44, West North Central cities (Kansas, Missouri, Nebraska, Minnesota and Iowa) 0.50, Mountaiu aud Pacific cities (Washington, California, Oregon and Colorado) 0.51, South Atlantic cities (Delaware, Maryland, Virginia, Florida and Georgia and Washington, D. C.) 1.03, East South Central cities (Alabama, Kentucky and Tennessee) 2.42, and West Couth Central cities (Texas, Oklahoma and Louisiana) 3.19.

Smallpox Vaccine Used For Fever Blisters

The successful treatment with smallpox vaccine of fourteen patieuts troubled for years with recurrent fever blisters of the eye, nose, lips and face is reported by Perk Lee Davis, M.D., Philadelphia, in The Journal of the American Medical Association.

Dr. Davis points out that a relation between immunity to fever blisters and the virus diseases, smallpox and chickenpox, was suggested in 1927. "In man," he explains, "there are many infectious fevers caused by virus agents. Although recovery from many virus diseases gives an immunity which lasts for years, it is not constant. It is well known that the common cold, fever blisters and iufluenza do not protect the individual from subsequent attacks."

The author says that smallpox vaccine for recurring infections characterized by fever blisters seems to work best if used every ten to fourteen days from four to eight times.

The Medical Profession and the F. T. C.

"For many years the columns of the American Medical Association have been thundering away at quackery and nostrums that prey on the lives and financial resources of credulous millions," K. E. Miller, M.D., Washington, D. C., director of the Medical Advisory Division of the Federal Trade Commission, declares in an article in The Journal of the American Medical Association for June 1, wherein he discusses the community of interest between the Commission and the medical profession.

"A splendid contribution has thus been made," he continues, "but the full fruition of these efforts rests with regulatory measures whereby compliance with certain standards can be enforced."

Dr. Miller points out that it may not be so generally known that the Federal Trade Commission is charged with the duty of confining advertisers of food, drugs, cosmetics and health devices to fair and truthful representations.

He says that although it is concerued with the claims made by manufacturers and distributors of drugs to the profession, the great bulk of the Commission's problems with respect to drugs has to do with preparations sold to the lay public for self treatment.

Discussing ways in which the profession can aid the Commission in safeguarding the public, as far as possible, against physical disasters born of false and misleading claims, Dr. Miller says:

"The parallel activities of the medical profession and the FTC, therefore, may be properly regarded in the light of mutual assistance. Medical testimony, either actual or potential, is the very backbone of every single case in this category. When falsehood and innuendo in this class of advertising becomes too distasteful to the physician he may take consolation in the thought that there is a way out of this wilderness, but he must at the same time realize that he or his kind will not only have to assist in blazing the trail but also leud a hand to the spade work."

Awards Set For Observations On Epilepsy

The recently organized Laymen's League Against Epilepsy announces two annual awards of $100 each for the best original unpublished observatious bearing on the subject of epilepsy. One award will be made for work done in a state epileptic colony or mental hospital; the other for work done elsewhere. Cliuical as well as laboratory studies will be welcomed, the announcement states. Since one object of the award is to encourage junior workers, the committee will take into consideration the facilities of the authors. The committee will consist of the president of the American League Against Epilepsy, the chairman of the section on convlusive disorders of the American Psychiatric Association, aud a third physician chosen by the officers of the Layman's League. It is hoped that winning contributions will be preseuted before the annual joint scieutific session of the first two of these organizations.

Contributions should be submitted by next December 15. Further information can be obtained from the secretary of the Layman's League, Mrs. N. Boud Fleming, 25 Shattuck Street, Boston.

Orthopaedic Group Elects Officers

Dr. George E. Bennett, Baltimore, was chosen president-elect of the American Orthopaedic Association at its recent session in Kausas City, and Dr. David E. Robertson of Toronto was installed as president.

Other officers include Drs. Norman T. Kirk of San Francisco, vice-president; Charles W. Peabody of Detroit, secretary; aud Rexford L. Diveley of Kansas City, Mo., treasurer. Toronto was teutatively selected as the 1941 convention city.

Red Cross Issues Nationwide Appeal for Relief Funds

The American Red Cross has issued a nationwide appeal for funds for a minimum war relief fund of $10,000,000 to continue and expand essential activities on behalf of civilian victims of the hostilities in Europe. According to an announcement, the Red Cross had, May 6, spent close to $1,500,000, most of it from reserve funds. More than $300,000 additional had been spent by chapters in purchasing materials for production of relief supplies.

Up to May 6 the 250,000 volunteer Red Cross workers had given more than 3,000,000 hours of their time since last September in the production of 447,000 warm garments and 2,261,000 surgical dressings. These supplies, along with tons of drugs and medicines, surgical instruments, x-ray equipment, ambulances, hospital tents, soap and other material have been shipped periodically to the Red Cross societies of war-affected countries. Aid is now being provided to Belgium, Luxembourg, the Netherlands, Finland, France, Norway, England, German-occupied Poland, Latvia, Lithuania, Rumania, Hungary and Yugoslavia. The announcement stated that the Red Cross societies of all countries involved in armed conflict in Europe have requested aid except Germany.

Dr. William A. Tolleson of Eufaula, Vice-President of the Association, was one of the members of the Missouri Medical College's graduating class of 1895 attending a reunion of the class in Murphysboro, Ill., in early June.

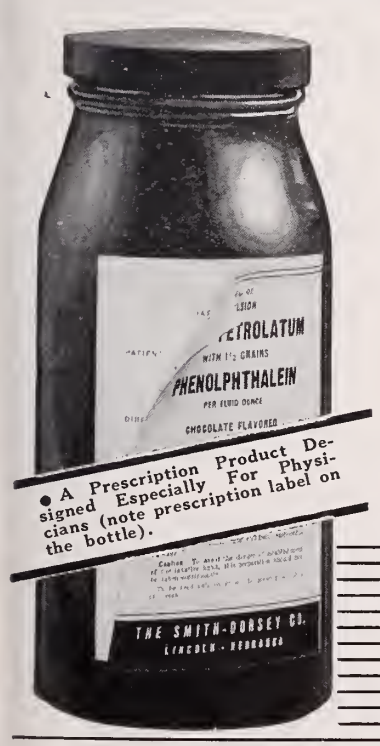
Gallbladder Disease in Children Not Rare

Since 450 cases of gallbladder disease in children less than 15 years of age are now on record, disorders of the biliary tract in children can no longer be regarded as rare; thus many of the vague "stomach aches" of children may readily be manifestations of this disease, Victor Seidler, M.D., and Elizabeth Brakeley, M. D., Montclair, N. J., state in The Journal of the American Medical Association.

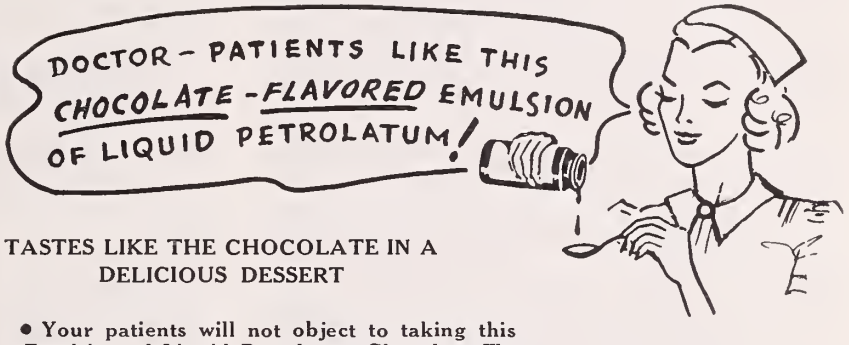
The two authors point out that: "The diagnosis of biliary tract disease during the early years of life may be reached by the same methods (x-rays) now employed for adults and is in no way more complicated or difficult than with adults. Because the symptoms so closely simulate those of appendicitis, differential diagnosis is often misused. Therefore the pediatrician (specialist in children's diseases) and the surgeon should be on the alert to recognize gallbladder disease unerringly and to operate promptly when surgical treatment is indicated."

Dr. George S. Mechling of Oklahoma City was the guest speaker at the June meeting of the Osage County Medical Society in Pawhuska. Dr. Mechling gave an illustrated lecture on "Suggestions in Anaesthesia for the General Practitioner."

Dr. George L. Kaiser has been appointed physician in charge of venereal disease clinics for the Muskogee city-county health unit, Dr. J. T. McInnis, director, has announced. Dr. Kaiser succeeds Dr. Robert E. Pugh, who has moved to Checotah.



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Tuberculosis Survey Reveals 202,021 Treated During 1938

A survey of tuberculosis facilities in the United States in 1938, conducted by the Council on Medical Education and Hospitals of the American Medical Association and reported in the latter's *Journal* for March 2, shows that, according to returns representing 99 per cent of the total bed capacity of all registered hospitals, during that year 202,021 persons in this country were treated for tuberculosis.

Supplementing one made by the Council in 1933-35, the survey also shows that in 1938 there were 122,342 patients admitted to those sanatoriums, tuberculosis departments of general hospitals and preventoriums which made reports. The average daily census was 79,300. Commenting on this, *The Journal* says:

"This represents an annual expenditure of over seventy million dollars for hospital care, not including the loss of earning power of the patients or the care of dependents. Tuberculosis is therefore still a great economic problem. The survey reveals also an increasing use of sanatorium facilities for far advanced cases, a trend which will aid in decreasing dangerous foci of infection. However, the continued hospitalization of nontuberculous children in some of the sanatoriums for adult tuberculosis is fraught with danger if separate units are not maintained. When additional beds are required for the care of patients it would seem logical to convert preventorium units to sanatorium use, for the isolation of open cases has proved more effective in the prevention of tuberculosis than the hospitalization of tuberculosis contacts. There are 98,801 beds available in this country for tuberculosis patients, including 4,830 assigned to preventorium care. While additional beds are needed in various communities, the evaluation of sanatorium needs can better be ascribed to members of the medical profession and other agencies familiar with local conditions. Institutional care is a vital factor in the prevention and treatment of tuberculosis. From an epidemiologic point of view, segregation and treatment accomplish the same result in removing foci of infection from the community, and that is the essence of tuberculosis control."

The survey shows that the waiting list for admission to sanatoriums and tuberculosis departments in 1938 totaled 8,797 as compared with 9,854 in 1935. Discussing this, the survey says:

"It is apparent that the present waiting list is largely the result of unequal distribution, since the number of vacant beds, 16,254 in all, exceeds the number of applications now pending by 7,457."

In state and city-county sanatoriums the waiting list was considerably greater than the number of vacancies, whereas in other sanatoriums the situation was reversed. Vacant beds in the tuberculosis departments totaled 6,677 or 5,452 more than the number of patients applying for admission. However, the municipal departments had a waiting list of nearly twice the number of vacancies.

Other facts revealed by the survey, based on information from 5,950 hospitals, include the following:

The total number of beds for tuberculous patients was 98,801, of which 87,084 were for adults and 11,717 for children. Included in the beds for children were 4,830 for preventorium care. The number of children admitted was 13,400, whereas the previous survey reported 15,523.

The average length of stay in the tuberculosis sanatoriums was 164 days as compared to 166 in 1934. In tuberculosis departments the average of 101 days was the same as in 1935. Discussing this, the survey says:

"The average length of stay in the sanatorium group is apparently decreasing as a result of continuing improvements in the medical and surgical treatment of tuberculosis. It may eventually increase, however, when the sanatoriums begin to realize their full responsibility in the rehabilitation of patients. Then the period of hospitalization will no doubt be extended to include suitable programs of graduated exercise and courses of vocational traning now lacking in most of the institutions. A well balanced sanatorium service is one that gives due consideration not only to prevention and treatment but also to rehabilitative measures that may prevent a further reactivation of the disease."

Infant Mortality Rate At Low Point

The Bureau of the Census recently issued statistics on the infant mortality rates for 1938, with comparisons of rates in previous years. The general rate for continental United States in 1938 was 51, the lowest since the birth registration area was established in 1915 and undoubtedly the lowest in the history of the country, the bureau states. In 1916 and 1918 the rate was above 100 deaths per thousand live births.

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ABSTRACTS : REVIEWS : COMMENTS and CORRESPONDENCE

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments From
LeRoy Long Clinic
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"Penetrating Wounds of the Abdomen." By Ambrose H. Storck, M.D., Annals of Surgery, May 1940, Page 775, Volume 111.

This comprehensive article, delivered before the meeting of the Southern Surgical Association in December, 1939, deals with the author's personal experience iu haudling 46 such injuries.

In my judgment it is au excellent article. It seems here worth while to list the followiug conclusions of the author:

(1) Facilities for quick transportation, arrangemeuts to shorten the preoperative duration of the injuries, and provisions for promptly combating shock and hemorrhage are important iu the uanagement of penetrating wounds of the abdomen.

(2) The symptoms associated with penetratiug wounds of the abdomen are frequeutly indefinite. Pain is frequently slight or absent. Penetrating wounds of the abdomeu which occur via the gluteal, sacral, or perineal regions are particularly likely to be overlooked be cause of the frequent absence of early symptoms.

(3) Physical fiudings in penetrating wounds of the abdomeu may be misleading. Teuderness and rigidity are not coustantly present.

(4) Examination of the urine for gross or microscopic blood should be made in order to reveal or confirm the presence of injuries of the urinary tract.

(5) Red blood cell counts and hemoglobin determinations may be misleadiug or late indicators of hemorrhage.

(6) Roentgenologic examination is often of value in the preoperative determination of probable injuries.

(7) The recognition of associated injuries, particularly those of the chest, is important in the management of penetrating wounds of the abdomen.

(8) Study of wounds of entrance and exit may indicate whether or uot penetratiou of the abdomen has occurred. When there is uucertainty conceruing penetration of the abdomen, exploratory celiotomy usually should be performed. Even when the wounds have been produced by small-sized shot, abdominal exploration should be performed.

(9) A short interval between the time of injury and the time of operation usually favorably influences the outcome, but operations should be delayed until patients have at least considerably recovered from shock. In upper abdominal peuetrating wouuds, operation may be necessary and is relatively safe during a longer period than in wounds which involve the lower portions of the abdomen.

(10) Prolonged shock produces irreversible deleterious effects; therefore, attempts should be made to rapidly combat shock and hemorrhage.

(11) The extent of hemorrhage largely determines the outcome in penetratiug wounds of the abdomen. In the presence of considerable hemorrhage, transfusious during and shortly after operation and totaling as much as 3,000 cc. of blood may be necessary. Transfusiou registries and blood banks are important in making available adequate supplies of blood. Transfusions of blood should, whenever possible, displace the administration of saline or glucose infusions or stimulant drugs.

(12) Spiual anesthesia may be employed to advantage in selected cases.

(13) The ricochet of bullets, as well as variations in the relative position of parts of the patient's body at the time of injury, as compared with the position of the same parts on the operating table, accounts for apparently bizarre courses of bullets. Uuexpected and unpredictable visceral injuries due to the position of the patient, or the phase of respiration at the time of injury, were frequently observed.

(14) The total number of perforations of either hollow or solid viscera was ouly slightly less in the group which lived than in the group which died.

(15) Whenever perforatiou of one wall of a hollow viscus is detected the opposite wall of the viscus should be examiued for possible injury.

(16) The mortality rate was unusually low in the group of cases with large intestine iujury, probably because of the relatively small amount of spillage which accompanies such injuries.

(17) Extraperitoueal hemorrhage or hemorrhage betweeu the leaves of the mesentery is likely to obscure important injuries.

(18) Injuries of the gallbladder, bile ducts, pancreas and kidueys are extremely serious. Perforatious of the spleeu usually require splenectomy. Hemorrhage from lacerations of the liver may sometimes be satisfactorily sutured, but in other iustances hemorrhage from lacerated surfaces of the liver can best be controlled by means of packs.

(19) Unrepaired performations are frequently discovered at autopsy; therefore, reexamination after all perforatious are thought to have been repaired is advisable if the patient's condition warrants such a procedure.

(20) Because of the important relatiouship between hemorrhage aud mortality, atteution during operation should be directed first to the arrest of bleeding.

(21) Time-consuming procedures, such as intestinal resectiou, should be avoided whenever possible.

(22) Mechanical anastomosis devices should rarely if ever be used.

(23) Enterostomy is usually ineffectual, and has been displaced by better methods of preventing or combating ileus.

(24) Drains introduced into the peritoneal cavity are usually uuuecessary and undesirable, but drainage of the abdominal wall should be instituted when hollow viscera have been perforated.

(25) Silk or cotton sutures aud ligatures are superior to catgut for the repair of hollow viscera and for the closure of the abdominal wall.

(26) Irrigation or lavage of the peritoneal cavity is usually futile, but it is desirable to suck out or pick out from the peritoneal cavity liquid blood, blood clots, detached particles of viscera, intestinal contents, and foreign bodies.

(27) Postoperative attention should include measures to combat any still existing shock or effects of hemorrhage.

(28) The application of heat to the abdomen, the admiuistration of large doses of morphine, the establishment of gastroduodenal suction drainage, the avoidance of enemata and flushes, and the infusion of glucose and lactated Ringer's solution are effective measures in preventing or reducing the severity of ileus and peritonitis. The Miller-Abbott tube as well as oxygen therapy may be employed to advantage in selected cases.

(29) Biologic preparations, such as coli-bactragen, and chemotherapeutic agents such as sulfanilamide and sulfapyridine may prove of value in reducing the mortality from peritonitis resulting from penetrating wounds of the abdomen. Desoxycorticosterone acetate, or other preparations containing the adrenal cortex hormone, may benefit those cases in which peritonitis is anticipated or already exists.

(30) Vitamins should be administered parenterally or orally to favor wound healing and to compensate for the general vitamin deficiency which is likely to develop during the post-operative period.

(31) Lyophiled serum or whole blood transfusions are sometimes necessary to maintain plasma protein at a normal level during the postoperative period.

(32) Atelectasis and pneumonia frequently complicate penetrating wounds of the abdomen; therefore, measures should be taken to prevent or promptly treat these pulmonary complications.

(33) The mortality of penetrating wounds of the abdomen is, and will surely continue to be, disappointingly high. In the present series, the mortality in the stab wound cases was 27.2 per cent; the mortality in the gunshot wound cases was 40 per cent; and the combined mortality was 37 per cent. However, recent advances in the treatment of shock, hemorrhage, ileus and peritonitis, all of which are so important in the management of penetrating wounds of the abdomen, are encouraging.

LeRoy D. Long.

"Management of Advanced Appendicitis in Childhood." By W. D. Gath, M.D., R. E. Grey, M.D., and Felix Ballenger, M.D.; The Journal of the American Medical Association. May 11, 1940—Volume 114, No. 19, Page 19.

The authors report their results in the treatment of 656 consecutive cases of appendicitis in children under 16, during the past 7 years. The cases are divided into 3 groups:

(A) Cases without gangrene or suppuration, 357 with no deaths.

(B) Cases with gangrene or suppuration but without perforation or with early perforation, 164 with no deaths.

(C) Cases with gangrene and perforation or with perforation and abcess, 135 with 4 deaths, or a mortality of 2.9 per cent. The mortality rate for the entire series was 0.6 per cent. The remainder of the article deals with the 135 cases of group C.

Immediate operation was performed on 119 patients and delayed operation on the remaining 16. There was 1 death in the former group, a mortality of 0.83 per cent. This child died on the 94th postoperative day with general septicimia and ulcerative endocarditis.

Of the 16 advanced cases which were treated without immediate operation, 3 died, a mortality of 18.7 per cent. The patients in the delayed group who recovered were in no worse condition on admission than was the average patient in the group operated on immediately. They had more complications and a longer hospital stay. There is no reason to believe that they would not have recovered if they had been operated on immediately. Could the 3 deaths have been prevented by operation? This, of course, cannot be answered, but it is certain that the results of operation would not have been worse than those of conservative treatment. There is the strong possibility that it might have stopped a fatal spread of peritonitis.

All of the operations were done by surgeons with considerable experience in operating for advanced appendicitis. Their technique is as follows: McBurney's Incision. Adequate exposure of the operative field. Gauze used sparingly and only to facilitate exposure. Location of appendix and evacuation of abscess by suction and gentle sponging. Removal of the appendix, if possible. (It was removed in all but seven of the 119 cases.) Ligation of the appendix stump and invagination with a suture of fine catgut, unless the cecum is too friable to permit suturing. Exploration of the pelvis and the lumbar gutter for pus or contaminated fluid. Insertion as indicated of Penrose tubes without gauze, into pelvis and lumbar gutter or as a coffer dam around the head of the cecum. Interposition, if possible, or the great omentum between the drains and the intestine. Loose closure of the wound in the abdominal wall.

The authors are convinced that a successful outcome in these advanced cases demands the use of abundant drainage. It is not necessary to drain a merely contaminated area of peritoneum, but an infected area, especially one enclosing an abscess, must be thoroughly drained and the drains be left in place 7 to 9 days—until a good sinus is established.

All patients had continuous gastric suction started immediately after operation, and continued until regurgitation of bowel contents had ceased. Codeine and morphine were practically the only drugs used. Control of body fluids was probably the most important part of the postoperative treatment. The authors' views are quoted:

"Peritonitis must be the ultimate cause of the changes in the quantity, compositiou, aud movements of the body fluids observed iu patients with appendicitis. We once thought that these changes were duc chiefly to a loss of water and electrolytes by vomiting. We now believe that peritonitis causes other and much more dangerous effects on the body fluids by robbing the blood of its proteins. It is well known that, when damaged by inflammation, the capillary endothelium permits the escape of these substances from the blood stream. It is conceivable that in extensive peritonitis the blood may lose enough protein to deprive it of the osmotic pressure necessary to absorb water from the tissues. In this event concentration of the blood and edema of the tissues would occur.

"Observation of the beneficial effects of blood transfusion on children with peritonitis led us to adopt the conception just stated. Our use of blood transfusion was purely empirical for a long time. We did not understand their real action till we began to study the effects of cutaneous burns on blood. Then we chanced to observe in two patients with generalized peritonitis due to perforation of the colon by cancer the identical blood picture caused by burns, namely hemoconcentratiou and a great decrease in blood proteins. It can readily be produced by aseptic peritonitis in the experimental animal. The clinical symptoms of extreme blood concentration are startling cyanosis, euphoria, tachycardia, low blood pressure, generalized edema and bubbling rales throughout the lungs. Onset of the trouble is disclosed by strict edema and a little cyanosis. The peritoneum has about the same area as the skin. Just as a total cutaneous burn is always fatal, so is a general peritonitis, and from the same cause and with the same symptoms. We do not deuy that peritonitis causes a true toxemia, but we have come to regard this as a secondary cause of the symptoms. It is always well to remember that inflammation favors exudation and not absorption.

"It follows from the forcgoing that the injudicious administration of water to a patient with widespread peritonitis is dangerous. It dilutes the blood proteins and washes them out of the damaged capillaries of the inflamed peritoneum.

"The bad effects or even mild degrees of hypoproteinemia are well known. It deranges the metabolism of the entire body by preventing orderly exchange of materials betweeu the blood and the tissue cells. It favors the spread of peritonitis because it devitalizes the tissues.

"We are convinced that without the free use of blood transfusions many of the desperately ill children in this series would have died, and we strongly advise that in every case of peritonitis the blood proteins be kept above the critical level at which edema develops."

The authors do not feel that appendicitis is more dangerous in childhood than in adult life. Since the diag-

nosis is more difficult in children it is probable that the disease is usually more advanced at the time of operation. Given a healthy child and a healthy adult both with appendicitis in the same stage and with identical treatment, they believe that the outlook for the child is about the same as for the adult.

Our purpose in abstracting this article is to call to your attention the very excellent mortality figures given here for advanced appendicitis. We feel certain that we shall soon be reading of the wonderful results obtained from the use of sulfapyridine in similar cases. It is doubtful that the sulfapyridine advocates can equal these mortality figures.

Warren Poole.

"True Cyst of the Pancreas. Total Extirpation (Kyste Vrai Du Pancreas. Extirpation Totale." By Charles LeFrancois, F.A.C.S., Chirurgien de l'Hotel-Dieu, Montreal, L'Union Medicale du Canada, Volume 69, Number 4, Page 368.

Credit is given to Judd, of the Mayo Clinic, and his collaborators for the first definite and extensive report about cysts of the pancreas, the report appearing in two articles in the Archives of Surgery in 1931. In those two articles 47 cases were reported. This important report by Judd and his associates has served as the basis for all articles by English and French authors upon the subject since that day.

Cysts of the pancreas are divided into true cysts and false cysts, the latter being more frequent.

False cysts may appear after a traumatism of the pancreas or after a pancreatitis.

The author classifies true cysts of the pancreas in four groups: (1) Cysts due to parasites, usually found only in localities where the echinococcus is present. (2) Cysts due to faulty development, including congenital lymphangiomas of the pancreatic region, and cysts associated with polycystic disease, in which case there may be cysts of the kidneys, of the liver, of the spleen, and, rarely, dermoid cysts of the ovary.

(3) Retention cysts designated by Brocq as cananicular cysts.

(4) Neoplastic cysts or cyst-adenomas. These cysts are ordinarily benign, but may undergo malignant changes.

In connection with the symptomatology, the author directs attention to the practical absence of all symptoms, with the exception of those due to the volume of the cyst.

The location of the cyst may be in the head, the body, or the tail of the pancreas. In growing, they develop most often between the stomach and the colon, but may develop between the stomach and the liver, and, more rarely, in the lower part of the abdomen.

In the differential diagnosis one must consider hydronephrosis cysts of the spleen which are exceedingly rare, and more particularly cysts of the messentery. Radiography quickly eliminates hydronephrosis and cysts of the spleen. Cysts of the pancreas are less mobile than those of the messentery. However, the differential diagnosis between a cyst of the tail of the pancreas and some other type of cyst may be difficult.

The best treatment for a true cyst of the pancreas is a complete extirpation, removing at the same time a small amount of pancreatic tissue. This, unfortunately, cannot be done in every case. Referring to the report of Judd and his associates, the author says that out of the 47 cases reported a total extirpation was done in all but 7 patients, and in these 7 the cyst was located in the tail of the pancreas.

If a total removal cannot be done, the surgeon has to content himself with doing a marsupialisation.

In connection with this article, there is one case report. The patient was a woman 42 years of age. She came to the hospital March 20, 1939, because of the presence of an abdominal tumor which had been noticed since a confinement on August 30, 1938. At first the mass was about the size of the ordinary fist, but it gradually increased in size. It was movable. It was not painful. The mass increased in size progressively, and when she came to the hospital it was the size of the head of an ordinary infant. The location of the mass was, and had always been, in the upper abdomen to the left of the umbilicus.

The abdominal wall was elevated in the left superior quadrant, and a mass about the size of an ordinary infant's head could be felt in that locality. It appeared to be smooth. It was not firm, but renitent. The mass was movable from side to side, but much less movable in a vertical direction.

The general condition of the patient was good.

An X-ray examination of the colon after a barium enema was practically negative. A pyelography was done, and it was negative.

After the investigations, the diagnosis rested between a cyst of the mesocolon and a cyst of the tail of the pancreas. Taking all things into consideration the probable diagnosis was cyst of the tail of the pancreas.

Operation was done on March 29, 1939, through a mediorectus incision 7 inches long, the incision extending both above and below the level of the umbilicus.

After opening the gastro-golic ligament the cyst appeared. The hand was swept around it, and it was demonstrated that it was independent of the mescolon.

The cyst being rather tense, it was decided to remove a part of the contents, and this was done by introducing a fine needle attached to a syringe without piston, the surrounding areas being first protected by compresses. The liquid removed was clear and slightly viscid. In all, the amount was around 1200 c. c.

In the meantime, it had appeared more and more clear that the cyst was attached to the tail of the pancreas. The area of attachment was limited in extent, it being about 3 cms. x 1 cm. The wall of the cyst at its base was very vascular.

"Because of the site of the cyst in connection with the tail of the pancreas, because of the small surface attached to the pancreas, because of the absence of adhesions to the posterior peritoneum and the mesocolon, and because of the absence of any evidence of an acute syndrome, we eliminated false cyst of the pancreas which would be better treated by a marsupialisation, and came to the conclusion that we were dealing with a true cyst of the pancreas, the proper treatment of which is, if possible, radical extirpation.

"The cyst was separated from the surrounding structures, and was removed, a small portion of the tail of the pancreas being removed with it. At the point of attachment to the pancreas there was a firm tumor about the size of a small prune. This was thought to be a small adenoma.

Briefly, the report of the histologist was, 'Cystic adenoma of the pancreas; no evidence of malignancy'.

The post-operative course was entirely satisfactory.

LeRoy Long, Sr.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
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"Treatment of Vernal Catarrh With Solid Carbon Dioxide." Vita La Rocca, M.D., New York. Archives of Ophthalmology, May, 1940.

The using of carbon dioxide is not new but the author has devised a small container of wood and metal that makes the manipulation much easier. The carbon dioxide now is much easier of access since it can be purchased in the form of dry ice at many places instead of preparing the solid product from a tank of gas. Ten patients were treated by his method. Some were followed for more than four years, showing uniformly good results.

The method of application is: Four per cent cocaine hydrochloride for ten minutes; eversion of lid, showing plainly the cobblestone vegetations; the cornea is protected by the everted lid. The point of the carbon dioxide stick is brought in contact with the vegetation for about forty seconds with a moderate amonnt of pressnre. This leaves a circular area, white and frozen. The stick of carbon dioxide is swabbed at the point with alcohol and the procedure repeated. The entire surface is covered at one treatment. The conjunctiva is allowed to defreeze before the lid is turned back to normal. This is repeated weekly. The usual reaction is congestion and slight pain. Usually the symptoms are lessened after the first few treatments. All other form of treatment is discontinued. Some of the cases reported were treated as long as three years—some were completed in five months.

The ten cases are reported in detail. The beneficial effect is the freezing, not the chemical properties of the carbon dioxide. The failure of a variety of treatments is probably due to the fact that the pathologic process is not only in the conjunctiva but also in the superficial layers of the tarsns.

There is qnite a discussion of vernal catarrh in relation to allergy. The author thinks that the high percentage (50 per cent) of cases reported as instances of vernal catarrh associated with allergy wonld probably be redneed if a proper diagnosis were made in the first place. He says that cobblestone vegetations must be present to have a diagnosis of vernal catarrh.

"Treatment of Trachoma With Sulfanilamide." Wesley G. Forster, M.D., Fort Apache, Arizona. American Journal of Ophthalmology, May, 1940.

The author gives a detailed aconnt of the routine treatment in trachoma cases for the previous five years to the sulfanilamide therapy. This required an average of two and one-half years to arrest the trachoma. The sulfanilamide was given in amounts of one-half grain per pound body weight in four divided doses daily. The conrse of treatment was ordinarily twenty-one days. If deemed necessary, the course was repeated. When the sulfanilamide therapy was instigated, all other forms of treatment was stopped. I will quote the anthor's results of sulfanilamide therapy:

"Of the 167 children treated with snlfanilamide, the pathology in 125 became arrested within 30 days of the beginning of treatment. The remaining 42, in whom conjunctival and corneal activity was still present, were given a second course and, as a result, the disease became inactive. Definite improvement was seen consistently within 10 days of beginning therapy and was characterized by the fading, first of the papillary hypertrophy and second of the follicnlar hypertrophy. Corneal activity, when grossly evident, responded rapidly, but the punctate fluorescein-staining epithelial lesions disappeared slowly, sometimes not nntil a month or two after the activity in the lids appeared to be clinically arrested.

The effect of snlfanilamide therapy on early trachoma was very striking. Freqnently both conjnnctiva and cornea returned to normal within the first ten days. In advanced cases with extensive papillary hypertrophy, deep-lying follicles, and much corneal involvement, the effect was slower. Frequently a clearing of both conjunctiva and cornea continued for weeks after the drug had been discontinned.

"Sulfanilamide in Treatment of Acute Infection of the Ear and the Mastoid in Infants and in Children." Howard M. Hebble, M.D., Philadelphia. Archives of Otolaryngology, May, 1940.

This is a critical review of seventeen cases with purulent aural infection that were treated with snlfanilimide. They occnrred from January 1938 to March 1939 at the Children's Hospital; the ages ranged from six months to nine years. These cases all cnltured hemolytic streptococcus and gave indication of mastoid involvement. The duration of the discharge varied from six days to six weeks; temperature ranged from 99 to 102 degrees F; tenderness over the mastoid region was occasionally present; roentgenograms seldom confirmed the otologic impression of mastoiditis with bone necrosis based on the appearance which was invariably present at operation. Charts and case reports accompany the report. The author's own conclusions are:

This study of the treatment of purulent aural infections so characteristic of mastoid involvement in infants and children has led to the following opinions:

1. These patients showed a generally poor response to conservative medical treatment, including the use of sulfanilamide.

2. If the administration of the drug is not to be discontinued until there is a complete clinical cure, as recently advocated by Long and Bliss, it will require longer than ten days to two weeks in many patients with this type of infection.

3. In view of the clinical observations and the relatively nontoxic effects of the drug as nsed in these cases, a larger dose and a longer period of use now seem not only safe to try but necessary for better results.

4. In cases of this sort in the wards of the otolaryngologic department of the Children's Hospital, if the patient's ear has been discharging less than four weeks, continuous sulfanilamide therapy throughout several weeks seems feasible providing there are no definite toxic effects.

5. However if the duration of otorrhea has already exceeded four weeks when the patient is first seen, operation still seems advisable if the otorrhea and lenkocytosis have shown no definite response after ten days to two weeks of sulfanilamide treatment. After operation the drug may be administered to better advantage.

6. In the presence of intracranial complications sulfanilamide does mask certain typical symptoms. This is to be kept in mind, but not to be offered as a contraindication to the use of the drug.

"Nasal Osteomata." A. S. Handousa. Cairo, Egypt. The Journal of Laryngology and Otology, April, 1940.

During the past seven years, out of 840,000 patients treated at the Nose, Throat and Ear Department, Kasr-El-Ainy Hospital, Cairo, there were only 37 cases of benign new growths found; Osteomata—18; Fibromata—14; Angiomata—2; Papillomata—2; Reticuloma—1. There was no tuberenlons or syphilitic element found and the Wassermann reaction was always negative. There was no similar new growth in other parts of the body or in other members of the same family. The fundi were quite normal. There were no central nervous symptoms. The eighteen cases are reported in detail with many excellent illnstrations. It was noted that: Males are more commonly affected than females; age incidence was between 12 and 54, the majority being below 28; except in one case osteomata have been single, and they were all unilateral; the first 13 cases were definitely attached to the frontal bone; other places of attachment were the tumonr of the spine, free in the ethmoid labyrinth, external angnlar process and the os plannm of the ethmoid bone. There is a large divergence of opinion as to the causation. The literature mentions such as tuberculosis, syphilis, sinns inflammations, ossified polyps, sequestrated rests, etc. Symptoms were many times not particularly prononnced, many of the osteomata being discovered during a rontine examination. However, some symptoms such as simple swelling were present and an exophthalmos prodnced by pressnre. The principles of the author's treatment is as follows:

1. To ascertain beforehand the exact site of attachment of the osteoma to the affected bone by X-ray investigation. This simplifies the operation and saves time and mntilation, as cutting through the affected bone slightly beyond the site of attachment leaves the tnmonr with its cartilaginous covering and pedicle

quite free in its cavity, ready for removal. In that way, too, recurrence is avoided.

2. The cavity left, usually a dilated sinus or group of sinuses is carefully examined as regards the presence of pus and the condition of the mucosa and dealt with accordingly, always providiug a suitable intra-nasal drainage and closing the wound externally.

Unusual bleeding does not take place and so previous carotid ligature recommended by some surgeons has not been necessary.

PLASTIC SURGERY

Edited by George H. Kimball, M. D., F. A. C. S.
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"Preserved and Fresh Homotransplants of Cartilage." By James Barrett Brown, M.D., F.A.C.S., St. Louis, Mo. Surgery, Gynecology and Obstetrics, June, 1940; Page 1079.

Since the reports of the use of boiled bone flaps in neurosurgery in 1928, it has been thought that cartilage might be preserved or refrigerated so that it might be used for a subcutaneous prosthesis. A summary of cliuical observations made over the last eleven years is given by Dr. Brown.

SOURCE OF PRESERVED TRANSPLANTATIONS

A constant supply of foreign cartilage is difficult to maintain. It has been obtained from excess cartilage obtained in autogenous transplantations from other patients, and open operations on the thorax. However, the most constant source of supply is obtained from autopsy material. The subjects, of course, must be of known race and age, and should be free from contagious disease. The cartilage is preferably taken from young adults and must be free from calcification.

STORAGE

Alcohol was originally employed for simplicity and safety. The cartilage being thoroughly washed in saline before implantation. Other preservatives and freezing may be used. Freezing may perhaps be the best means in a known refrigeration system with sterile cartilage, but these conditions are difficult to obtain.

ZOO GRAFTS

Animal grafts were tried in the early work on this subject, but have been discarded as unsatisfactory.

FOREIGN MATERIALS

Ivory has apparently been satisfactory in some instances, but has beeu known to be extruded years after implantation. In animals, wood, rubber and celluloid have been maintained for several years, but have not proven clinically satisfactory. Some of the newer plastics and metals are now under observation, but several years will be required for a final decision.

Dr. Brown believes that the best possible prosthesis would be one that can be injected, carefully molded, and would then retain its shape. Liquid suspension of cartilage has been considered especially for small defects. Parafine is still thought to be too unsafe for use.

The fate of preserved cartilage transplantations has been discussed in previous articles. Briefly it may be stated that in a good many instances the preserved transplant is absorbed and replaced by fibrous tissue. In other instances the cartilage may be completely absorbed.

CLINICAL EVALUATION

The benefits of preserved over fresh autogenous cartilage may be as follows: (1) no operation on chest of patient; (2) a large amount is available; (3) patterns can be made more easily; (4) probably not as apt to curve and distort tissue; (5) may be used as a temporary prosthesis either intentionally or as a necessity. The objectionable features are: (1) it is not very esthetic, especially if race or color is off, or if there has been some disease in the donor patient; (2) it is not as resistant to infection; (3) it may be completely absorbed without infection; (4) it needs an especially good bed without tension on the wound; (5) if it becomes too hard, irregularities cannot easily be trimmed subcutaneously; (6) if one fails it is probably best to repeat with fresh cartilage.

Single L-shaped nasal transplantations are used routinely by cutting the pattern out of the angle of the cartilage. This avoids bending a single piece or runniug the risk of the use of a single piece of cartilage without columella support. It is put in through an incision down the columella.

Fresh cartilage transplants from other individuals may be used. This is especially desirable in children where a sufficient costal cartilage has not been developed. The donor in this instance is preferably a parent or near relative, but this is apparently not necessary.

Any type of cartilage is apt to curl and cause deformity. Dr. Brown at the present time is making observations in the use of vitalium core in his cartilage. This paper presents some new ideas as well as restatiug some ideas which are already established.

"Severe Injuries of the Face: Some Considerations in Their Diagnosis and Treatment." By Allyn King Foster, Jr., M.D., Jr. Assistant Surgeon, New York Post-Graduate Hospital, N. Y. American Journal of Surgery, Page 391.

Dr. Foster states that the purpose of his article is to present some principles in diagnosis and discussion of some indications for treatment which should routinely be followed in injuries of the face. He further states that several experiences with maltreatment has led him to consider this subject. He states further that in many instances it is necessary that several specialists, namely: the neurosurgeon, the eye, ear, nose and throat, general and the plastic surgeon, join forces in the reconstructiou of severe traumatic injuries.

EYE INJURIES

Superficial eye injuries might lead to a great source of error. It is of utmost importance to diagnose the condition of the eye; to determine the status of the sight, and status of the extra orbital muscles . Au opthalmoscopic examination is indispensable, as is some idea of the amount of vision present. Traumatic corneal ulcers are more frequent than is generally suspected. The treatment of corneal ulcers, when diagnosis is prompt and when the anterior chamber of the eye has not been entered, is simple. Pupils should be kept dilated by atropine and the eye covered. Lacerations in the eye, especially the upper lid, may be very serious because of the likelihood of infection and penetration of foreign bodies. X-rays are essential in all penetrating wounds where foreign body retention has been at all possible.

NOSE INJURIES

A complete examination of the nose may usually be carried out without x-ray. Careful examination should be made of the status of the air-ways as well as the frame work of the nose. Subcutaneous emphysema will lead one to suspect a rupture of the para-nasal sinus. Examination of the lacrimal duct should always be carried out. A simple test to determine its patency is to put a small drop of mercurochrome on the lower eye lid and look for its appearance beneath the inferior turbinate. This test should not be tried in the presence of hemorrhage.

WOUND SUTURES

Dr. Foster believes that all wounds showing excessive bleeding should be sutured; however, the indications for suturing multiple small laceration-contusions and perforations from splintered glass are less certain. One must first make certain that the functions of the face are not interfered with, and if interference is present, repair is most certainly indicated.

Dr. Foster lists the most important functions of the face as:

1. Sight.
2. Movements of all muscles of facial expressions.
3. Movement of eyes.

4. Chewing.
5. Lacrimation.
6. Salivation.
7. Hearing (that part which deals with the external ear).
8. Normal passage of air through the nose and the mouth.
9. A pleasing cosmetic appearance.

Dr. Foster believes that the patient with extensive facial wouuds should be put under observation in a hospital with an exact recording of the wounds as to depth and extent. Too often a patient is neglected because no one troubles to examine the wounds of the face as to their extent.

The principles of repair of facial wounds are:

1. Hemostasis.
2. Conservation of tissue.
3. Minute approximation.
4. Minute attention to detail.

In conclusion, Dr. Foster says that there are no set rules with which a surgeon can be considered well trained for facial injuries, unless he has more than the general training given to develop "general surgeous" in the average institution. Too little is taught of the functions of the face and the importance of detailed diagnosis and repair of the facial injuries. "I believe the reason for this is the existence of overlapping specialties of neurosurgery, eye, ear, nose and throat, and general and plastic surgery." Some of the conditions mentioned in this paper sould lead to a better recognition and greater responsibility assumed by the doctors who accept the care of facial injuries .

Comment: This is an excellent paper calling to attention a timely subject and should bring all of us to a further recognition of our responsibility in the care of extensive facial injuries. We should all feel a great responsibility in any extensive injury and make every effort possible to reconstruct these injuries as nearly perfect as possible.

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D., F. A. C. S.
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"The Local Implantation of Sulfanilamide in Compound Fractures: Its Effects on Healing." J. Albert Key and Thomas H. Burford, Southern Med. Jr. Vol 33, No. 5, May, 1940.

The authors were greatly impressed by the excellent results which have been reported in the use of sulfanilamide locally in compound fractures. The work primarily was reported by Jensen, Johnsrud and Nelson in July, 1939 and the authors have been using this with very satisfactory results. They have been curious as to the effects on healing with the local implantatiou of sulmanilamide. The results quoted by Jensen, Johnsrud and Nelson of 38 compound fractures and 2 compound dislocations in which 5 to 15 grams of sulfanilamide crystals were implanted in the wound and primary closure was done, showed not one single incidence of primary wound infection. Later the wounds were recompounded in two instances and became infected. A previous series of 94 compound fractures treated by the same methods, except that sulfanilamide was not used in the wounds, showed the incidence of infection in 27 per cent and there were 7 cases of gas gangreue and 5 amputations.

They found also that the local implanation, while it did not kill staphylococci, inhibited their growth and permitted the body to control the possible infection.

The authors in the coutrol period of experiments on rabbits implanted sulfanilamide in some in the forelegs on one side and did not on the other, to check the healing period both clinically and by sacrificing the animal. This was done also on some dogs.

The conclusion of these experiments was that the local implantation of sulfanilamide crystals in compound fractures tends to lessen the danger of infection and does not perceptibly interfere with union of the soft tissues or of bone.

The authors wish to point out that local implantation of sulfanilamide does not permit closing of grossly contaminated or infected wounds. These must be debrided in the usual way and cleansed, devitalized tissue removed and closure effected if possible, in wounds that are not already grossly infected.

In large open wounds with extensive loss of skin and soft tissue, sulfanilamide crystals are sprinkled over the area, after sterile cleansing, and vaselized gauze implanted.

The question of the use of sulfanilamide in clean surgical wounds as a preventive of infection is brought up, but is not recommended in that post-operative infection is so rare it would not warrant the use.

(Note by the abstractors): This particular treatment has been used by us for the past several months, with excellent results. We find clinically that it inhibits iufection in compound fractures and permits early closure. To date we have been fortunate enough not to have had a case of gas gangrene develop following its use.

"The Surgical Treatment of Recurrent Dislocation of the Shoulder Joint." Svante Orell, Stockholm, Sweden. Surg. Gyn. & Obst. Vol. 70, No. 5, May, 1940.

It is pointed out by the author that in treating recurrent dislocation of the shoulder joint by surgery there are three possible approaches; (1) surgery involving the joint capsule and joint ligaments; (2) the tendons and muscles; or (3) the bones of the joint. In addition, these methods may be combined in many ways.

The author prefers the use of bone block or reconstruction about the joint rather than of the muscles and tendons. He describes in detail several of the original operations which have been devised for creating a bone block in the anterior and inferior portion of the glenoid to prevent the dislocation.

Eden, in Jena in 1917, was the first to use this method. His method and several that followed, required the opeuing of the capsule and considerable surgery about the joint. Also, required prolonged immobilization post operatively and thus in the author's opinion reduced part of the value of surgery by creating rather stiff joint for several months.

In 1927, Speed improved this method somewhat by boring a hole one inch deep extracapsularly into the inferior border of the scapular neck and inserting a tibial transplant into the canal so that it projected three-quarters of an inch in front of the articular border.

The author describes a procedure in which os purum is used in a manner similar to that of the Speed technique. The os purum is a prepared bone which is autoclaved and from which all organic material has been removed. He uses the compact type of bone and uses first a prepared instrument exactly the shape of the os purum, shoves it into the neck of the scapula, withdraws it and inserts the os purum and taps it into place. This is cut off short so that it just projects beyond the glenoid lip and holds the head of the humerus in position. The arm is held in adduction for approximately two weeks, after which exercises are gradually begun. His technique, which is as he admits essentialy that of Speed's, is rapid, does not require removal of bone from other portions of the body due to the use of os purum and permits rapid use of the arm. A case is cited of excellent, early function.

The abstractors feel that at present the use of the Nicola operation, which is a tenodesis of the biceps tendon, is their operation of choice. The use of os purum has not been general in this country and consequently the Speed operation is the one preferred if a bone block were to be used.

Abstracted by Howard B. Shorbe, M. D.

Submitted by Earl D. McBride, M. D.

INTERNAL MEDICINE

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"The Popularity of the Ewald-Boas Test Meal; Reasons For Its Survival." By Dino Sandroni, M.D., and Zachary Sagal, M.D., F.A.C.P., New York City. Annals of Internal Medicine, May 1940, Volume 13, No. 11, Page 2134.

In this, the author gives us the answer to the question, which presents itself to both the clinician and the clinical pathologist, in a very brief and comprehensive manner.

His own summary and conclusion make a very satisfactory summary of the report:

Gastric analysis is a worth-while procedure in all cases presenting any aberration of the digestive functions.

The single aspiration method and the carbohydrate test meal are satisfactory and give sufficient information in 90 per cent of cases.

The remaining 10 per cent may be further studied by the fractional method, using histamine, neutral red or any other method for the differentiation between true and false achorhydria.

We believe that the procedure advocated by Wilhelm is not applicable for routine gastrointestinal examinations in the clinic or in private practice. The greater accuracy and scientific value of the method proposed is, in the predominating majority of cases, far outweighed by discomfort to the patient and by the additional laboratory work, without adding anything of clinical value. Because of the considerable labor involved in this procedure, the tendency on the part of the clinician, if the precise method were advocated as a recognized routine for general adoption, would be to omit the test altogether. Thus, a valuable aid in the management of gastrointestinal disorders might be neglected and fall into disuse.

"Progress in Chemotherapy of Bacterial and Other Diseases With Special Reference to the Prontosils, Sulfanilamide and Sulfapyridine." By John A. Kolmer, M.D., Professor of Medicine, Temple University School of Medicine, and Director of the Research Institute of Cutaneous Medicine. Philadelphia. Archives of Internal Medicine, April 1940, Volume 65, Page 671.

In this, the author has described, in a very interesting and detailed manner, the progress of chemotherapy in connection with the use of the prontosils, sulfanilamide and sulfapyridine. The historic development of this most important advance in medicine is nationally reviewed. Therapeutic effects in the treatment of streptococcic, meningococcic, pneumococcic, staphylococcic, urinary tract (including gonococcic), undulant fever, chancriod, thyroid fever, Clostridium Welchii, tuberculosis, and miscellaneous bacterial and virus infectio and even diseases due to animal parasites are summarized. Many tables are given. The data is gathered from the reports of numerous authors and reports from widely distributed sections of the world, also from physicians representing a very great variety of specialties. The bibliography is, therefore, very complete and appears to be one which should be exceedingly helpful to any investigator who is interested in reviewing this subject.

Symptoms and signs of toxicity from the drugs are also reviewed.

As a result of the review, certain principles and dosages in connection with the administration are outlined, which may be given briefly as follows:

1. Early treatment.
2. A large initial dose.
3. Oral administration when possible.
4. Parenteral administration may occasionally be preferred as initial dose.
5. Four to six hours day and night administration.
6. Concentration of the drug in the blood varies in individuals and, therefore, blood determinations are helpful when large doses are necessary.
7. For severe infections, maintain a level of 10 to 15 mg.
8. For moderate severe infections, a level of 5 to 10 mg.
9. For mild infections determinations of concentration in the blood are not required.
10. Parenteral administration of sulfanilamide and neoprontosil in severe cases who can not take the drug orally.
11. It is frequently advisable to give the drug orally and parenterally, especially in the treatment of severe infections.
12. Intraspinal injections of 0.8 to 1 percent solutions of sulfanilamide are sometimes advisable.
13. Daily doses are reduced with improvement.
14. It is highly probable organisms may require a tolerance for any of the sulfonamide compounds.
15. These compounds apparently render bacteria not susceptible to immune bodies.
16. The incompatibilities are not well understood.
17. Restrict fluids in urinary infections.
18. Suggested doses of sulfapyridine in the treatment of pneumonia are given.
19. The doses of sulfanilamide in the treatment of gonorrhea are given.
20. Watch carefully for evidences of toxicity.

UROLOGY

Edited by D. W. Branham, M. D.
502 Medical Arts Building, Oklahoma City

"The Effect of Castration on Benign Hypertrophy of the Prostrate In Man." Charles Huggins and Roland A. Stevens, From the Dept. of Surgery, University of Chicago. Journal of Urology, May 1940.

Whether benign hypertrophy of the prostate is under endocrine control is a problem of immediate interest since all workers are not agreed on this point.

The authors, in an attempt to throw light on this problem, selected three patients who were suffering from prostatic hypertrophy. A suprapubic cystotomy was performed and biopsy sections of the enlarged prostate was taken for microscopic examination and at the same time a bilateral orchidectomy was done. Twenty-nine, 86 and 91 days later, respectively, these patients were subjected to a second stage enucleation of their prostate and the tissue obtained at this operation was also examined by microscopic section.

A comparison of the microscopic picture of the two specimens of prostatic tissue before and after castration revealed significant histologic changes. Generally there was a diminution in the height of the epithelial cells lining the acini, as also there was a lessening in the diameter of the individual acini and a reduction in number of glandular elements.

Following castration on benign hypertrophy in man supports the view that the prostatic epithelium, at least, is under control of the testes.

"A Plea For the Abolition of the Retention Catheter In the Preparation of Patients For Prostatic Surgery." Richard P. Middleton, M.D. Salt Lake City. American Medical Journal June, 1940.

This is a rather lengthy communication published in the "Clinical" notes department of the Journal. As the heading explains, the author believes that the retention catheter is in most instances a useless and dangerous mode of treatment for the pre-operative care of the average patient suffering from prostatism. He believes that if retention of urine is complete, frequent intermittent catherization is preferable to the inlying

catheter. He presents several valid arguments from his own experience to support this contention.

Comment: It is true that less emphasis is being placed on prolonged catheter preparation before submitting patients to transurethral surgery, but to advocate that the inlying catheter be discarded completely can hardly be supported by the majority with clinical experience. There is still a large group of patients who require continous bladder drainage before surgery is attempted. One cannot substitute in majority of these the intermittent method of catherization for various reasons; infection, bleeding, pain on passage of the catheter, etc. I am sure most urologists are thoroughly convinced that the properly placed inlying catheter is a much better tolerated method of promoting bladder drainage over a period of days than the practice of frequent catherization.

Excellent as this article is on a controversial subject, in my opiuion the editorial staff of the Journal showed poor discriminatory judgment in allowing its publication. After all, it is only one individual's opinion as to the merits or demerits of a fairly acceptable and traditional mode of treatment which has been proven by the experience of years.

The Journal is a publication widely read and its prestige is high. What is printed in its pages is by mauy accepted as scientific verity. For that reason all articles that appear on its pages should be selected with the viewpoint of the general profession kept in mind. Certainly the complete abolition of the inlying catheter in the treatment of prostatism is not a generally accepted dictum in the practice of most urologists of the present day.

Fellowships in Chemistry Are Established

For the academic year 1940-41, Abbott Laboratories has established fellowships in several universities with important departments of organic chemistry and biochemistry. The fellowships, carrying stipends of $650 per year, will be available to graduate students in the last or next to last years of graduate work leading to the doctorate degree. The recipients, who are to be selected by the universities in which their work is being done, are not limited as to the subjects on which they will work.

The object of the fellowships is to provide means for the carrying on of additional scientific work in American universities. The future progress of chemical developments iu this country will depend upou the availability of well-trained and qualified men, and it is the intent of Abbott Laboratories in establishing these fellowships to lend encouragement in these general fields.

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Dangers in Sugar Solutions Shown

Concentrated solutions of sucrose (sugar), often injected into the vein to reduce increased blood pressure within the skull, should not be administered to patients with kidney damage, and large or repeated doses by veiu should be avoided in any case, W. A. D. Anderson, M.D., and W. R. Bethea Jr., Memphis, Tenn., warn in The Journal of the American Medical Association.

They report the finding of kidney lesious during postmortem examination of six patients given such solutions. Although the degree of functional damage from such lesions has not yet been determined, it seems probable that there is significaut change in the kidneys' efficiency, the authors believe.

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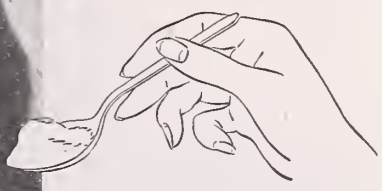
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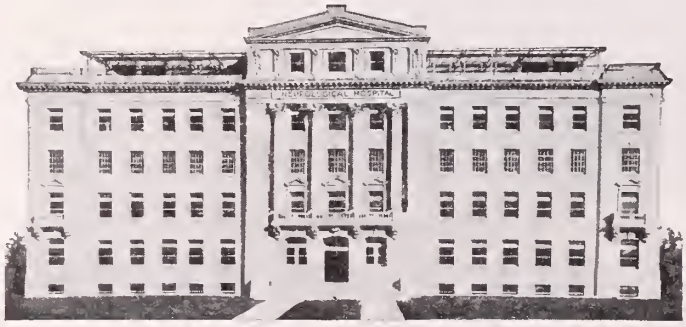
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VOLUME XXXIII OKLAHOMA CITY, OKLAHOMA, AUGUST, 1940 NUMBER 8

Local Treatment of Nasal Allergy*

O. Alton Watson, M. D.
Oklahoma City, Oklahoma

I believe most of us are in accord with the view that nasal allergy is an abnormal local response to extrinsic or intrinsic stimuli. For some reason not thoroughly understood the mucous membrane of the nose and to some extent that of the paranasal sinuses become involved. The symptoms and signs vary somewhat depending upon whether the condition is seasonal or perennial but usually are characterized by recurrent attacks of sneezing, watery discharge without constitutional symptoms of acute cold, presence of a pale water-logged mucous membrane with eosinophiles in large numbers.

There are three therapeutic approaches available, (1) elimination of offending allergen, (2) general desensitization, (3) local desensitization. For the first treatment the allergen must first be isolated and identified as the offending one. For instance, if a patient should have a nasal allergy due to animal dander, giving away the cat or dog would solve the problem at least temporarily. I say temporarily because it is known that allergic individuals are prone to lose sensitivity to certain things and acquire it for others. If, on the other hand, it is found after exhaustive tests that the patient is sensitive to ragweed, bermuda, and elm, it is not ordinarily feasible for him to move entirely away from these factors. This leads us to the other avenues, either or both of which offer possibilities of relief.

Desensitization: I am sure this method of treatment rightly overshadows the other two types in the treatment of seasonal nasal allergy, or hay fever. A great many people are made comfortable throughout the ragweed or elm season by graduated doses of pollen extract, their improvement being evidenced by the fact they return to the allergist regularly for treatment. For the perennial type of nasal allergy, desensitization does not appear to be as valuable as in the seasonal. The reason is of course obvious. The offending allergen for the seasonal type can usually be quickly identified and is more apt to be single or few in number, while in the perennial type allergens are usually multiple, often both extrinsic and intrinsic factors being involved, thus making it more difficult both to identify and to desensitize the individual. I do not mean to imply that good results are lacking in the desensitization treatment of perennial nasal allergy, because some cases show striking relief of symptoms after a short period of treatment; but it is my opinion that results are not uniformly as good as in the seasonal hay fever.

Local desensitization: As is commonly understood, this means raising the sensitivity of the mucous membrane of the nose to as near a normal level as possible. There are a great many different methods used with the same purpose in view, and the fact that there are so many proves that none is entirely satisfactory. The result desired in each case is fibrosis of the submucous tissue with disappearance of the lymphocytes and eoseniophiles. A few of the methods are as follows:

(1) Cautery. A cherry red cautery is used to burn a line or series of lines along the inferior turbinate and sometimes lightly on the tip of the middle turbinate.

*Read before the Section on Eye, Ear, Nose and Throat, Annual Meeting, Oklahoma State Medical Association, May 8, 1940, in Tulsa.

The destruction of tissue is carried as deep as the periosteum.

(2) Diathermy. Some feel that coagulation by this method produces as good results without as much reaction.

(3) Chemical agents topically applied; strong solutions of silver nitrate, phenol, trichoracetic acid, and copper are the most commonly used.

(4) Sclerosing solutions to be injected in submucosa, such as alcohol, quinine and urea, etc.

(5) Zinc ionization as proposed by Warwick[1]. There has been a great deal of discussion as to the value of this procedure. Hollender and Fabricant[2] believe that evaluation of the procedure should be based entirely on clinical results, and describe histologic studies of biopsies of nose which they believe are insufficient to reveal the true condition of the nose. They are of the opinion that the clinical results obtained warrant continued use of ionization in many cases. On the other hand Rowe[3] believes that no better results are obtained than with simpler methods, and that discomfort after ionization is greater.

I have recently used ionization on three patients, two with seasonal spring hay fever and one with the perennial type. Both the seasonal cases showed 85-90 degrees cessation of all symptoms within two days. The third or perennial case showed no improvement. The dosage was 15 millimiperes for 12 minutes and the reaction was negligble. The zinc jelly was used. I understand some of the men in Tulsa have used this procedure a great deal and would appreciate some response from them on their ideas regarding it.

(6) Repeated small applications of some escharotic in the nose. Very often if one will gently apply a little Trichloracetic acid or phenol to the tip of the middle turbinate, the anterior half of the inferior turbinate and a small area of the anterior portion of the septum for several times once or twice weekly mild cases of sneezing and stuffiness of the nose will be relieved. No local anesthetic is required and the burning lasts for less than a minute. It can be used even in children that cooperate.

Description of local treatment would not be completed if treatment of complications of nasal allergy were not included. Polyps: These may be seen as a result of chronic nasal allergy or chronic sinus infection, most often with the former. The associated symptoms and signs are required to differentiate the etiology. However, when present from any cause it appears to be an irreversible process and surgical removal is required. Following removal an allergic management is indicated for the allergic cases and further sinus therapy for the infectious type.

It is my opinion that local treatment of nasal allergy is being neglected. Many mild cases are seen in our offices who do not show sufficient trouble that they will go through an allergic workout to find the cause of their trouble but would be benefited by a few local treatments. Some patients who have not obtained relief under allergic management will do so with local treatment. Very often local and general desensitization together will produce results when either would fail alone.

In closing, I wish to emphasize, (1) close cooperation between the Rhinologist and Allergist, and (2) local treatment in selected cases.

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Exstrophy of the Bladder*

An Experimental and a Clinical Study of Cases

GEORGE H. KIMBALL, M.D., F.A.C.S.
N. ROBERT DRUMMOND, M.D.
OKLAHOMA CITY, OKLAHOMA

During the past five years we have found a record of eighteen cases of exstrophy of the bladder in this state. (See chart) There are, no doubt, others that we do not know about. We have seen all of these cases except two. Because of the fact that there is apparently a fairly large number of these cases for which no treatment was being offered, our interest was stimulated. We had had no experience in operating on such cases. The cases ranged from the age of 48 hours to

*Read before the Section on General Surgery, Annual Session, Oklahoma State Medical Association, May 7, 1940, in Tulsa.

35 years. (See table of summary of cases) It is stated that exstrophy of the bladder occurs once in every thirty thousand to once in every fifty thousand births.[1]

It is, in its anatomic configuration, a defect in the anterior wall of the bladder. In the complete case there is a non-fusion of the pubes with an absence of the symphysis. In the male there is usually a short penis with a complete epispadias, and in the female there is complete lack of fusion of the mons, labia, clitoris, and the anterior urethral wall. The internal genital organs are not affected. The dome of the bladder and the trigone are herniated when the patient is in the upright position. The ureteral orifices are visualized as slits and spout urine intermittently. The infra-umbilical fascia is defective and usually there is a wide diastasis recti. These patients, as a rule, walk with a waddling gait. The gait is fairly characteristic of this condition.

Wyburn[2] describes the embryological origin of the defect as a "mesodermal deficiency particularly of the secondary mesoderm, arising from the hind end of the primitive streak" following which there is impaired development of the muscular coats of the bladder, symphysis pubis, the external genitalia, and the infra-umbilical portion of the abdominal wall.

The medical profession has for many years recognized that short-circuiting of the urine is indicated in exstrophy of the bladder. As early as 1850, Dr. Simon had an unsuccessful outcome following transplantation of ureters into the bowel for exstrophy.[3] In 1894, Maydl transferred the trigone of the bladder, with the ureters attached, into the bowel.[4] Dr. Martin, in 1899, reported operations on seventeen dogs and three human beings.[5] He stated that his success was partial. In 1886, Balona and Edwards brought the ureter out through the skin in the loin region.[6] This was reported as successful. Dr. Coffey clarified the technique during a great many years of study and experiments and has described about three different ways in which to do the operation. Higgins, more recently, has modified the Coffey operation and has reported a rather large series of cases for both exstrophy and carcinoma of the bladder. The principal contributors to this work are: Beer, Mayos, Henman, Counsellor, Higgins, Kirwin, Mathe, Ferguson and Pathe, Wodhaus and Carobba, and others.

Before attempting to do any of these different described procedures on human beings, it was thought best to do, first cadaver dissection — both preserved cadaver and fresh cadaver; and to do experimental operations on dogs. At the medical school it was found fairly easy to study sixteen cadavers at the time medical students had the pelvis exposed thoroughly. The principal advantage gained from this study was to familiarize ourselves with the blood supply of the

TABLE OF CASES OF EXSTROPHY OF BLADDER

Case No.	Sex	Age	Treatment	Outcome	Associated Anomalies
1.	male	35 yrs.	none	no change	none
2.	female	4 yrs.	No surgery suggested because of pyelitis	semi-invalid	none
3.	female	11 yrs.	refused surgery	no change	none
4.	male	4 yrs.	Attempt at closure of bladder (by flaps)	some improvement	epispadias
5.	female	12 yrs.	none	no change	none
6.	male	2 mos.	none	no change	none
7.	male	1 mo.	none	no change	none
8.	male	48 hrs.	transplant	expired	none
9.	female	11 yrs.	transplant	expired	none
10.	female	18 mos.	none	no change	prolapse of rectum
11.	male	11 yrs.	bi-lateral transplant of ureters & cystectomy	recovery	Bi-lateral inguinal hernia. Bi-lateral cryptorchidism.
12.	female	17 yrs.	bi-lateral transplant of ureters & cystectomy	recovery	none
13.	male	3 yrs.	no surgery advised because of rectal prolapse	no change	Bi-lateral cryptorchidism. Bi-lateral inguinal hernia. Prolapse of rectum. Epispadias.
14.	female	4 days	none	no change	left club foot
15.	male	13 days	none	no change	none
16.	male	5 mos.	none	no change	none
17.	female	1 mo.	none	no change	none
18.	male	14 mos.	none	no change	Bi-lateral cryptorchidism

ureters and its anatomical relation to the bowel. The next preliminary work was the performing of the operation in detail on fresh cadavers. This was possible at the University Hospital during the course of routine post-mortem examinations. The operations were done on about ten different bodies. After reading the different methods in the literature, it was decided to familiarize ourselves with the Coffey operation,[7] the Higgins operation[8] and the Lyman-Farrell technique.[9] Twelve dogs were operated on, using the Higgins technique in two, the Coffey operation in two, doing one side at a time and the remainder were done using the Lyman-Farrell procedure.

RESULTS OF EXPERIMENTAL SURGERY

1. One dog died following intravenous anesthesia within twelve hours.

Fig. 1, 2, 3) Under spinal or general anesthetic, a mid-line incision is made in the lower abdomen. The bowel is packed off with the patient usually in trendelenberg position. The recto-sigmoid is identified and inspected as to its mobility. One visualizes a point of attachment for the right ureter and one for the left ureter at a future date. The peritoneum is picked up at the brim of the pelvis, split for a distance of about three inches and the lower end of the right ureter is elevated. The site of implantation on the bowel is brought over toward the ureter. A longitudinal incision is made in the serosa of the bowel, the muscle split and the submucosa exposed. The length of this bed in the bowel should be approximately two inches. The ureter is next anchored by a row of fine black silk on a small needle to the

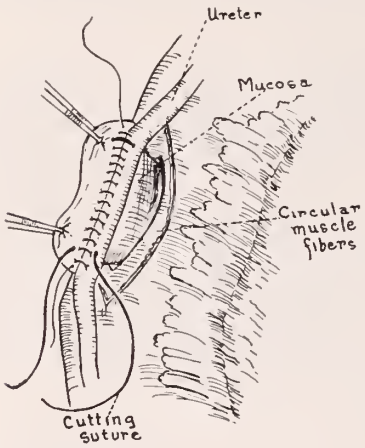


Fig. 1. Farrell Lyman Technique, showing a posterior row of apposition stitches placed. Cutting suture in position.

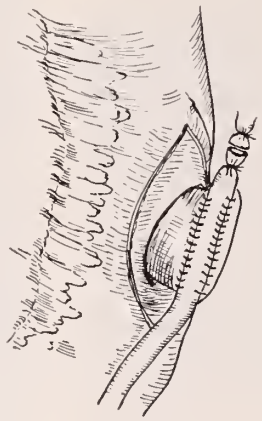


Fig. 2. Farrell-Lyman Technique. Anastomosis completed.



Fig. 3. Farrell-Lymau Technique. Severed stump of the ureter buried in the bowel wall.

2. One dog died as a result of infection in the site of implantation. (Coffey technique)

3. One dog died as a result of failing to pass the needle through the mucosa of the ureter. (Lyman-Farrell technique) This led us to use a catheter in cases of exstrophy so as to make certain that the needle perforated the mucosa. Catheterization is extremely easy to do in cases of exstrophy.

4. One animal had a large wound infection without any interference or detriment to the implantation.

The technique of Lyman-Farrell operation is based on the old Eck-fistula operation (1877)[10] for the anastomosis of blood vessels.[9] It is to be remembered that Coffey pointed out that when a duct enters a hollow viscus the entrance is in an oblique direction so that the muscular action of the viscus wall acts as a check valve to prevent return flow. The technique used, then, is as follows: (See bowel. We employ a running suture to accomplish this. A vein clamp is placed on the ureter above the site of the anastomosis. A strong black silk suture on a short curved needle is then placed into the lumen of the ureter and allowed to come out approximately 1 cm. from the entrance of the needle. We employ a ureteral catheter at this stage so as to make certain of the progress of the needle. After the suture comes out of the ureter, it is then reversed and passed into the lumen of the bowel and out of the bowel at the same level and about the same distance that it traversed the ureter. This suture is then covered with sterile gauze and the anterior fixation suture is placed to roll the ureter into the bed prepared for it, and attach it throughout the length of the bed. The two layers of suture is not unlike the fixation employed in a posterior gastro-enterostomy. Next, the silk suture for making a fistula is

picked up and by having the assistant steady the bowel and the ureter, the operator uses the silk suture as a saw to cut or establish a fistula between the ureter and the bowel by a sawing motion of the black silk suture. The suture is then discarded. The vein clamp is now removed from above the anastomosis and placed below the anastomosis. This allows one to inspect for any leakage at this time. If there is no leakage, the next step is to doubly ligate the lower end of the ureter after the catheter is withdrawn, divide the ureter and bury the severed end under a portion of the serosa of the bowel. The serosa is next closed over the site of the anastomosis. The peritoneal leaves are then mobilized and if possible, the two edges are brought over the entire site of the anastomosis. If this is not practical, the omentum is simply brought down and tacked over the field of operation. The abdomen is then closed in layers without drainage.

Ladd and Lanem[11] report several cases from Boston and give five requirements of the procedure, as: (1) a three stage operation, (2) transplantation of the right ureter, because of its relative inaccessibility to the colon, and then the left in two to four weeks, (3) transperitoneal route without the use of guides or retention catheters, (4) no drains left in the peritoneum, and (5) removal of the bladder as soon as bossible. These workers believe three to five years is the ideal age for this work. In this series of cases the workers used a modification of the Coffey operation without the use of guides or catheters.

Pre-Operative Care

The patient should be admitted to the hospital several days prior to the operative procedure and a thorough study of the patient begun. These cases should have complete blood studies, including a complete blood chemistry. Intravenous pyelograms should be done to determine: (1) Size and position of the kidney. (2) Size and course of the ureter.

If the patient is found to be in condition to permit surgery, the lower bowel is cleansed several days before by daily administrations of magnesium sulphate or castor oil in small doses, and daily colonic flushings. The day before surgery, the purging is omitted and the lower bowel cleansed by enemas. This is repeated the morning of surgery. Fluids and glucose are given in large amounts to the patient the evening before operation.

Post-Operative Care

General post-operative care proceeds along lines for other abdominal and pelvic surgery. The patient remains in bed for ten days to two weeks. Diet is usually gradually increased. Since the ultimate success of the anastomosis depends on immediate function of the uretero-sigmoid fistula, it is well that some diuretic be given immediately. We employed a colon tube in the rectum immediately after operation, removed every three hours. Saline and glucose intravenously was used to increase kidney function and to maintain the fistula.

Complications

The most common complications encountered in the human cases were: (1) a marked ileus following the first operation. At the second stage, very little or none was noted, (2) edema of ureter with slowing of urinary output. We encountered no hemorrhage in either case. (3) Later complications were a mild degree of hydronephrosis and I believe some degree of pyelitis. Pyelograms were taken to demonstrate this condition. In each case urinary antiseptics and proper bowel elimination resulted in a disappearance of symptoms for the time.

Report of Cases

CASE I.

Z. R., age seventeen, white female. History of congenital exstrophy and epispadias with no attempt at repair. The girl had gone to school for a part of the time, but had not been able to attend regularly and had not yet entered high school. She was fairly clean, but was suspicious of all questions and attempts at examination.

Menses: Onset at 15, a regular 28 day cycle.

Physical Examination: Revealed a white female, seventeen years old. There was normal development for this age and secondary sex characteristics present and normal for the age. Physical examination revealed no pathology other than the deformities associated with the exstrophy. There was absence of the umbilicus with a complete lack of fusion of the anterior bladder wall with a herniation of the dome and trigone of the bladder. On close inspection, the ureteral orifices could be seen to spout urine intermittently. There was a complete cleft of the mons, labia, clitoris and the anterior wall of the uretha. The vaginal orifice was normal and placed in its normal position. The gait was characteristic of pubic non-fusion.

Laboratory: Blood studies were normal, including a normal blood chemistry. NPN 26 mg percent, uric acid 2.7 mg percent, blood Kline negative.

X-ray: Films, after the injection of Neo-Iopax, show normal filling of the right and left ureters and kidney pelvis. A separation of the right and left pubic bones of five to six inches was visualized.

After thorough preparation, a left ureterosigmoid anastomosis was done on November 30, 1938, using the Lyman-Farrell technique. The post-operative course was relatively



Case No. 1. Fig. A. Photograph of bladder before admission.

Case No. 1. Fig. B. Final photograph with bladder dissected and defect covered with skin skin graft. Dressing covers donor site.

smooth, the highest temperature on the second day, post-operative, was 101.2 degrees. The patient was discharged from the hospital on the twenty-first day, post-operative. She returned to the hospital four weeks later for a check-up. At this time NPN was 24 mg per cent and the uric acid 2.9 mg per cent. X-ray showed a mild dilation of the left kidney pelvis and ureter. The herniated bladder was considerably drier than previously, with an area of atrophy around the left orifice. She was readmitted on March 6, 1939. X-ray and laboratory studies revealed no change except for slight progress in the hydronephrosis. On March 14, 1939, a right side uretero-sigmoid anastomosis was done using the same technique. The post-operative course was uneventful except for two or three days of vomiting. Two weeks later the bladder was excised and a small skin graft was used to cover the defect. Six weeks after the last anastomosis the blood chemistry was unchanged and the patient was discharged from the hospital. The patient was lost sight of for about sixty days, when she returned complaining of malaise and fever with pain in both costo-vertebral angles. She was admitted to the hospital and the NPN was found to be 40 mg per cent. X-ray showed considerable progress in the hydronephrosis of the left kidney. The patient had lost weight and had very little appetite. She was given vitamin B and a urinary antiseptic as well as daily rest periods. In a few days the fever had subsided and she was able to be up and around the ward. She gained considerable interest in her personal appearance. She was discharged from the hospital and was last heard of one year after her surgery when she reported that she had started to school and had gained twenty pounds in weight. She stated that she was employed in a store as a clerk.

CASE II.

J. L. S., age eleven, male. Admitted to the hospital on July 29, 1939, with a history and physical examination similar to that of the above patient. This patient had been examined by the late Dr. Coffey when the patient was a few months old. No operation had been done.

Laboratory: The blood studies were normal. NPN 31 mg percent, uric acid 15 mg percent.

X-ray: Showed a normal size and position of the kidney pelvis and ureters. The right ureter was anastomosed to the bowel on August 5, 1939, using a modification of the technique described by Higgins. The ureter was not ligated below the fistula. The



Case No. 2. Fig. A. View of patient before excision of bladder.

Case No. 2. Fig. B. View of patient after excision of bladder.

post-operative course was rather stormy, with a paralytic ileus which lasted for about ten days. Following this, recovery was rapid and the boy was discharged from the hospital on September 10, 1939. He was readmitted on November 1, 1939, and an attempt made at the second stage on November 11, 1939, but difficulty with the anesthetic prevented operative work. The second stage was done November 17, 1939, using the Lyman-Farrell technique. The post-operative period was uneventful. The bladder was removed on January 13, 1940, and at the same time the right lower ureter was ligated. Laboratory on January, 1940, showed an NPN 28 mg per cent and uric acid 1.2 mg per cent. X-ray revealed a mild dilation of the left preter. Final discharge from the hospital was on January 28, 1940. A recent check-up revealed a much improved patient with a marked weight gain and much improved mental attitude. This patient has a bilateral congenital inguinal hernia which will be repaired in the near future. He is attending school regularly.

Both of the above patients are able to retain urine in the bowel over a period of four to six hours during the day. Each of them sleep eight hours at night without disturbance.

CONCLUSIONS

Two cases of exstrophy of the bladder are reported as having been successfully operated. These cases are the first ones in our experience with exstrophy of the bladder. Both of them have a fairly comfortable existence and have gained much self-confidence. They had previously mentioned that life was no longer dear to them.

It is believed that the plan of Lyman-Farrell can be used in cases that can undergo such an operation. We have had no experience with infants and hence are rather inclined to allow these children to reach the age of three to five years before operative work is undertaken.

Since one man is certain to have a very limited number of such cases, it is recommended strongly that he do preliminary animal and cadaver surgery.

I realize that all the different methods have merit and each surgeon must choose the plan that he thinks will best suit his needs. These two cases are the first human cases that I know of that have been done by the Lyman-Farrell technique.

ACKNOWLEDGMENT

1. Due acknowledgment is given to the pioneers in this particular field of surgery.
2. I am grateful to Dr. R. M. Howard and Dr. R. U. Patterson for encouragement in this work, as well as the use of the experimental laboratory.
3. Dr. C. B. Taylor has been very helpful in giving me advice and guidance.
4. The Sisters of St. Anthony Hospital have been especially lenient in furnishing hospitalization for these patients.
5. To Dr. Grace Hassler for the administration of anesthetic in all cases, both experimental and human.

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Case No. 1. Fig. 1. X-ray of pelvis showing wide separation at symphysis.



Case No. 1. Fig. 2. Intravenous pyleograms before surgery.



Case No. 1. Fig. 3. Intravenous pyleograms six months after surgery. Note beginning hydronephrosis.



Case No. 1. Fig. 4. Intravenous pyleograms nine months after surgery. Note advance hydronephrosis (left.) Patient has compensated for this condition.

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DISCUSSION

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Exstrophy of the Bladder

Higgins has estimated that there is one case of bladder exstrophy in every 30,000 births so that there are approximately 2,000 persons in the United States with this deformity, while 70 babies are born each year with this defect. Approximately fifty per cent die before they are ten years of age. Sixty-six per cent die before twenty.

When we consider the predicament of these unfortunates, there can be no question of the advisability of attempting to alleviate their condition. These miserable people are social outcasts because of the odor of urine that they carry with them always. In addition, there are frequently co-existing congenital deformities such as undescended testicles, cleft palate, spina bifida, epispadias, Hare lip or absence of the vagina. Absence of the pubic arch and the wide gap between the transverse rami of the symphysis give the pelvis a flattened appearance. This co-existing deformity produces a waddling gait that is very characteristic. I feel that there can be no question but that surgical intervention is not only justified but mandatory.

There has been some diversity of opinion about the time when surgical procedures should be adopted. Higgins believes, and I think rightly, that these cases should be operated on early, at any time after the third month. His principle criterion is the condition of the rectal sphincter. If it shows a firm grip on the examining finger he feels that the operation of transplanting the ureters can and should be done early.

Infants withstand surgical procedures well. Hare lips and cleft palates are done early. Operations for pyloric obstruction and for intussception are done without hesitation and with fairly uniform success. Therefore I feel that the transplantation of the ureters into the recto-sigmoid early in the infants life should be attempted. The virulent organisms that are found in later life are not so abundant in early life and the danger of a complicating peritonitis is lessened.

Dr. Kimball's technique is interesting and apparently feasible. The main point, of course, is that there must be free drainage of urine with no constriction where the ureter enters the bowel with the hope that a competent valve will be established.

The Diagnosis and Treatment of Malaria*

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The method of making an accurate diagnosis of the malarial infections is by the demonstration of the plasmodia in the blood, stained with Wright's or other modifications of the Romanowsky stain. It is possible in many instances to make about as certain a diagnosis on the clinical history, symptoms and physical findings as in any other disease. However, this applies only to the ordinary cases of malaria, especially the intermittent type with the clinical history of the malarial residence and previous attacks with the chill, fever and sweat. These cases need no discussion.

The three points in the diagnosis which concerns us most in the light of our present therapeutic knowledge is, first, the type or

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variety of the disease present. There are many of these described, but their classification is more or less arbitrary, and they are of very little practical value except in the pernicious types, where they may indicate whether heroic treatment is urgent or whether the usual routine is all that is necessary. These types are fortunately rare, and microscopical examination of the blood will make the diagnosis very much better than any clinical classification that can be made. When a large number of parasites are found in the blood, it is prognostically an unfavorable sign. When a number of them are found in a single erythrocyte, it is a very unfavorable indication, and we must prepare ourselves for immediate heroic measures if pernicious symptoms supervene. Unfortunately, many of these cases are so urgent that the situation does not afford time for hospitalization or microscopical examination, but require the immediate institution of all of our most heroic efforts if a fatal issue is to be avoided. Therefore, it behooves us as physicians to acquaint ourselves with these pernicious symptoms.

Second, we are concerned with diagnosing the chronic, latent or a typical form of the disease. These are suspected when there is anemia, cachixia, enlargement of the spleen or liver, or both. These forms are not as readily demonstrated in the blood stream by the ordinary smear, but if consistent search is made in a properly prepared smear, few cases are overlooked. Our search is often facilitated by the thick film method, or by the injection of 1 cc. of 1 to 1000 solution of adrenalin chloride, causing a contraction of the spleen and a squeezing out into the blood of more parasites. If quinine has been administered previous to examination of the blood, the parasites will not be demonstrated.

Third, we must concern ourselves with the particular parasite present, whether plasmodium vivax, of the tertian infection plasmodium malaria of the quartan, the plasmodium falciparium of the estivo-autumnal, or the plasmodium falciparium quotidianum of the quotidion estivo-autumnal. We must do this in order that we may be able with our present therapeutic knowledge to eliminate the sexual as well as the asexual forms from the blood, as will be seen from the following discussion on treatment.

Treatment: For the past seven years malaria therapy has followed two trends: one, finding some new drug that is more efficient than the cinchona alkaloids; second, finding the optimum condition for the cinchona alkaloids themselves. The introduction of new synthetic drugs and different conceptions of the etiology and epidemiology of the malarial infection have rendered the modern treatment far different from that of a decade ago. At present there are three drugs for the treatment of these infections, each of which has its definite place in the theropeusis, and if used properly they are sufficient to eradicate practically all malarial infections. These are: quinine, plasmochin and atabrine.

Quinine: One of the alkaloids of cinchona bark has justly been regarded as a specific in malaria ever since its discovery in 1820, and until more recently has been more largely used than any other drug in the treatment of these infections. If properly administered over a sufficiently long time, it will eliminate practically all malarial infections, but in some individuals even theraputic doses produce severe toxic symptoms. In these patients quinidine may be tolerated with the same clinical result and same dosage. The salts that are most frequently used are the sulphate, di-hydro-chloride and tannate. The sulphate is most generally useful, and should be employed in the treatment of most infections. The di-hydro-chloride is more soluble, and should be used intravenously when this is required in pernicious infections. The tannate, because of its tastelessness, is a useful salt to employ in the treatment of malaria in children. A great majority of malarial infections can be treated with quinine by mouth. The dosage I have used for years, to my satisfaction, is as follows: Grains five, every three hours, for three days, or until acute symptoms have subsided, then three times a day for one week, then grains ten at bedtime for six weeks. In children less than one year: grains one-half; one year, grains one; two to ten years, grains two to three; ten to fifteen years, grains four to five.

The greatest objection to the use of quinine is the length of time of treatment. Comparatively few individuals will take the drug so long after the disappearance of symptoms. The intravenous use of quinine should be reserved for the pernicious infection, and should be given with the first appearance of symptoms referable to the central nervous system, or symptoms connected with the algid, bilious or other pernicious types.

Quinine di-hydro-chloride is best adopted for this use, and is prepared as follows: to 300 cc. of normal saline solution, 3cc. of quinine di-hydro-chloride solution made in distilled water, and containing twenty grains of the drug. The solution thus prepared is boiled, filtered and given at about 120° F. This is repeated if symptoms are not improved in from four to six hours. As many as three or four injections may be given in twenty-four hours. Prompt diagnosis and instant intravenous therapy are the keynotes of success in the treatment of pernicious malaria. The longer such treatment is

delayed the greater will be the number of fatalities. There is no medical emergency that requires more heroic measures. Supportative measures must be supplemented and spinal puncture is said to be life saving in some of these cases. I have never had occasion to employ it.

In recent years the health section of the league of nations has recommended a short course method of treatment in which smaller doses of quinine, fifteen to eighteen grains, are given from five to seven days, and discontinued so as to allow relapses to occur, after which other short courses are repeated as required. This method is based upon the fact that immunity to malaria, of strain but not of species, is conferred by repeated attacks of the infection. The treatment recommended does not kill all of the plasmodia, but a few remain and produce relapse, with each relapse a certain amount of immunity is conferred until complete immunity is acquired.

Saunders and Dawson working on the same theories, report their results. They used ten to twenty grains for five days with the following conclusions: (1) that relapses within one year following treatment of malaria with twenty grains quinine sulphate for five days are estimated as twenty-five to forty-five percent. (2) The immediate effect against malarial fever of ten or twenty grains quinine daily, appears as good as the larger doses. (3) It was recognized that there are strain differences in response to quinine treatment, hence, their conclusions apply only to the area in which the work was done, but trial of the short course of treatment in other parts of the United States is recommended.

While this method is theoretically sound, it is not without certain dangers, and not practical in the malarial area in which I reside. A case in point is Mrs. B., age 34, who when first seen had had three rather severe paroxysms. Quinine was given according to the usual method. However, this patient discontinued her medication after the sixth day because of a visit to her mother's death bed. Two weeks later she became suddenly critically ill with a chill and severe prostration with hematimesis and b l o o d y diarrhea, bleeding from the gums, subnormal temperature, cold clammy perspiration. She died apparently in acute shock, in spite of all the heroic measures instituted. It is my opinion that cases residing in a malarial district will become infected often enough, and are negligent enough in taking treatment to develop a certain immunity to the particular strain present in spite of all the malaria control, and the efforts of the physician to eradicate the infection completely in each case seen.

Plasmochin: Was developed synthetically in 1915. Although it is a quinoline derivative, it is not a synthetic quinine. It was first introduced for the treatment of malaria by Schulemann and his colleagues, and at that time was recommended for the treatment of all types of malarial infections. In 1927 Heger and Manwell proved that it was more effective in Bird malaria than quinine. The toxicity of the drug renders it an unsafe one to administer indiscriminately in doses that are sufficiently large to cure tertian or quartan infections, while still larger doses are inefficient in the treatment of estivo-autumnal infection. Therefore it has proved unsatisfactory in the treatment of human malaria. However, it has a unique action in killing off the sexual forms, which transmit estivo-autumnal malarial infection from man to mosquito. It should be reserved for patients who present gametes in their peripheral blood. It should be given every case previously treated with quinine, because quinine does not kill these. It is not necessary in tertian or quartan cases treated with atabrine, but it should be given estivo-autumnal cases treated with atabrine.

Atabrine: Was first produced by Mauss and Mietzsch in 1933. Chemically, it is an aldyl-animo-acridine derivative. Like quinine it is of value in all forms of malaria. It is a powder of intense yellow color, neutral in reaction, and soluble in water to the extent of seven per cent. It passes through the intestinal tract and kidneys without decomposition and can be demonstrated in the urine and feces. The excretion is slow, probably extending over several weeks. It is combined with an inert substance, and given by mouth in tablet form. Usual dosage, one and one-half grains, three times a day. Also, it is prepared in ampules for intravenous use.

Atabrine destroys the life cycle forms of all the species of malaria, also the mosquito cycle forms of the gametes of the tertian and quartan species, but does not destroy the gametes of the estivo-autumnal species. It is a cumulative drug because of its very slow elimination from the body. Its rapid specific action upon the malarial plasmodia renders long continued use unnecessary. Then we may say for atabrine that it will eliminate tertian and quartan malaria from man, and also render him harmless so far as transmission to the mosquito and later to man is concerned; while in estivo-autumnal infections atabrine will eliminate the disease in the patient. Plasmochin, one-sixth grain administered in conjunction will prevent transmission to the mosquito. Because of its slow excretion, the dosage usually recommended should not be exceeded. As regards its safety, I have treated 49 cases of malaria in the past year with the following untoward results: Case I—Miss W., school teacher, 20 years

old, developed on fifth day yellowish discoloration of the skin and sclera, and a definite psychosis. The discoloration of the skin and sclera cleared in two weeks and she was able to resume teaching in three weeks. Mrs. M., 29 years old, on the third day developed nausea and vomiting, and a definite psychosis which cleared up in two weeks. Mr. L., after taking atabrine for three days developed severe nausea and vomiting, discoloration of the skin and sclera. The nausea and vomiting was very obstinate, and it was necessary to give fluids intravenously; six months later this patient attempted to take the drug again with the same chain of symptoms. I have had numerous patients with yellowish discoloration of the skin and sclera. All of these cleared up in two weeks. In the past year I have used atabrine intravenously in one case of remittant malarial fever. Patient of 64 years, received three injections at one hour intervals, developed delirium and died in coma. Of the cases treated, there were relapses in two.

Atabrine has been used successfully in the treatment of blackwater fever, and should be preferred to quinine. I cite here a case reported in the Journal of the Medical Association of Alabama by Russell and Morton. A white Cuban boy, 13 years of age, had chronic estivo-autumnal malaria and suffered a severe attack of blackwater fever. Anuria persisted for 36 hours. The spleen tumor reached to the umbilicus; and the hemoglobin 24 per cent. Ten days later there was a rise of temperature, and ring forms of estivo-autumnal parasites were present again in the blood film. Two grains of quinine were given; and a violent paroxysm followed promptly, with a temperature of 104 degrees F. and hemoglobinuria. The boy was in a serious condition. The hemoglobin dropped to 18 per cent. Three days later atabrine was given—0.2 gm. daily for three days. No untoward reaction ensued; the parasites disappeared; and he made a remarkable recovery. In three weeks his hemoglobin increased to 56 per cent, and the spleen was reduced to a level with the rib arch. The case was followed for five months and no relapse occurred.

Conclusion: (1) an accurate diagnosis of malaria is made only when the plasmodia is demonstrated in the peripheral blood. (2) In order to employ our present day therapeusis, it is important to be prepared to diagnose pernicious malaria, the chronic or atypical forms; and to determine the particular parasites present. (3) We have in quinine, atabrine, and plasmochin, three drugs, all of which have a definite place in the treatment of malaria, and if used properly are sufficient to eradicate or cure practically all cases.

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Discussion

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The Diagnosis and Treatment of Malaria

Dr. Shippey has very well covered the subject which is still a very serious problem in southeast Oklahoma. I thoroughly agree with the statement that the classification of malaria is of little practical importance except in the pernicious types, and fortunately we see very few of these cases. Personally, I have never seen a case of the hemorrhagic or hemoglobinuria type.

Usually, the clinical history, symptoms and clinical findings suffice to make a diagnosis. Working in connection with the State Health Department and the Indian Department during the summer of 1939, the Indian nurse and myself obtained 148 slides from Indians of all ages. Most of these gave a history of previous chills and fever, and many were having these symptoms at the time. None had been taking quinine. Only 26 positive slides were reported from the State Health Laboratory. To me, this proves that the routine examination of malarial smears is impractical in a country that is endemic for malaria.

As for treatment, I was very enthusiastic about atabrine during the summer of 1938, but less so in 1939. It has a definite place in the treatment of malaria, particularly in those patients who have an idiosyncrasy to quinine of the urticarial type. These are the only patients in whom I consider quinine definitely contraindicated. I have had the same experience as Dr. Shippey with atabrine in regards to a psychosis. They all clear up in a few days. I have had some cases of skin discoloration that did not clear up for two months. One great objection to atabrine is the nausea and vomiting, sometimes necessitating hospitalization and intravenous glucose.

Dr. Shippey states he reserves the use of intravenous quinine for the pernicious types and I think rightly so. Personally, where I feel parenteral quinine is indicated I use the intramuscular route. I have heard of one death that was felt due to intravenous quinine.

I have had no experience with the use of plasmochin. I should like to mention one drug that Dr. Shippey did not, and that is Mapharsen. I have used it in about ten cases

that did not respond to quinine or atabrine with very satisfactory results. I have never had to give more than two injections of .04 gm. each.

For the past two years, I have routinely prescribed Veracolate tablets, a bile salts preparation, one tablet three times a day. I use this with either quinine or atabrine. I feel that these drugs are greatly enhanced in their action by this preparation.

The Treatment of Trachoma*

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Until very recently the management of trachoma was largely a surgical problem. In the history of this very interesting disease there has been only one procedure which has consistently weathered the storm of new fads and superstitions. The local application of escharotic drugs has been in consistent use since the dawn of history three to four thousand years ago. Chemotherapy as introduced during the past three years has created the newest revolution mainly because of its ease of administration and freedom from pain.

LOCAL TREATMENT

In use today are many new and old escharotic drugs in various dilutions ranging from copper sulphate to one per cent silver nitrate solution. Recently chaulmoogra oil and quinine di hydrochloride have been used and reported by several men as being effective. All of these means have limitations and are admittedly tedious both for patient and physician.

Our management of trachoma has become somewhat standardized and is very simple. We use a four per cent solution of silver nitrate applied by gently brushing the lids and fornices with tiny well-soaked cotton applicators. The medication is allowed to remain for ten minutes followed by irrigation of the eye with a sterile boric acid solution until the conjunctiva is free of the thin grey membrane produced by the action of the silver solution. For home use a solution of zinc sulphate, adrenalin, and boric acid is usually prescribed to be administered three times daily as drops. In cases with lesions of the cornea and iritis, hot compresses and a one per cent solution of atropine sulphate are administered either at home or in the hospital.

I have collected and tabulated sixty-five cases of trachoma from our private files all managed in this simple manner. The tabulated results are as follows:

SEX:

15 Female (23% of total)
50 Males (77% of total)

RACE:

64 White
1 Indian

AGE:

0- 20	16 or 25% of total.
21- 30	16 or 25%
31- 40	14 or 21%
41- 60	16 or 25%
61-100	3 or 4%

TYPES:

Type 1. (Those who had incipient trachoma with tiny follicular lesions and 20/20 vision)
16 cases or 25% of the total of 65 cases.

Type 2. (Those who had granular, velvety, succulent disease of the lids; papillary lesions predominating)
24 cases or 3% of the total.

Type 3. (With extensive scarring disease of the lids)
23 cases or 35% of the total.

Type 4. 25 cases (38%) of flare-up trachoma were included in types two and three as to findings when first seen.

COMPLICATIONS:

Pannus:
28 cases or 43% of the total.
12 cases were bilateral.
16 cases were unilateral.
8 cases were complete in one or both eyes.

Keratitis: 25 cases or 39% of the total had keratitis ranging from small punctate opacities to large ulcers covering most of the cornea.

Iritis: 7 cases or 10% of the total.

Pterygium: 5 cases, four of which were bilateral.

*Read before the Section on Eye, Ear, Nose and Throat, Annual Meeting, Oklahoma State Medical Association, May 7, 1940.

Ectropion and Entropion. One case each deserving of surgery.
Old Corneal Scars:
19 cases or 29% of the total.
8 cases unilateral.
11 cases bilateral.
One patient had known active lues.

AVERAGE DURATION OF TREATMENT:
Intensive treatment: (Daily to bi-weekly) Six weeks.
Convalescent treatment: (Weekly to monthly) Eight weeks.
Total observation period: (Occasional treatment) Twenty-one months.
A few cases of flare-up trachoma were observed a total of only a few weeks but many were followed for five to ten years. Many of those observed over long periods were considered arrested but some had repeated mild flare-ups of their eye disease. Two cases had repeated severe flare-ups and were classed as malignant.

RESULTS OF TREATMENT:
29 cases or 45% were arrested.
16 cases or 25% were markedly improved.
7 cases or 11% were improved without known exacerbation.
12 cases or 18% were unimproved due to frequent relaspes.
1 case (follicular trachoma) showed no improvement.

TOTAL:
19% were considered unimproved in the final analysis.
81% were improved to arrested.

VISUAL IMPROVEMENT:
15 cases or 23% had 20/20 vision at beginning and end of treatment.
5 cases or 8% did not improve (extensive corneal scarring).
4 cases or 6% had only slight improvement (one line of Snellen type or objects to light perception).
25 cases or 38% had marked improvement of vision; from two to five lines of Snellen type. Average improvement was 2.6 lines.
16 cases or 24% had incomplete visual records.

PANNUS:
28 cases (40 eyes).
16 cases unilateral (3 mm. to complete).
8 cases disappeared entirely.
5 improved greatly (regressed to thin pale membrane).
3 remained unchanged.
12 cases bilateral (24 eyes)
13 disappeared entirely.
8 improved greatly.
3 remained unchanged.
Total of 40 eyes affected.
21 or 52% disappeared entirely.
13 or 32% improved greatly.
6 or 15% remained unchanged.

KERATITIS:
The 25 cases all cleared up completely with adjunctual hot compresses and atropine.

SCARS:
19 cases (30 eyes).
5 did not improve.
14 improved one to two lines vision of Snellen type. These were given adjunctual potassium iodide by mouth.

CHEMOTHERAPY

There has been two means of chemotherapy proposed and the results of each reported in literature. Both the use of sulfanilamide given orally and tartar emetic given intravenously have been used apparently with considerable success.

In 1937 Hinneman reported three cases of trachoma treated with sulfonil drugs. Soon afterwards Lian and Dik each reported a rather incomplete series of cases showing effectiveness in clearing up of conjunctival inflammation and rapid healing of corneal complications with sulfanilamide. In October, 1938, Loe reported 140 cases of trachoma in Indians. His results showed all to be improved and at least five arrested. Only a few mild complications were mentioned. Almost simultaneously in October 1938 Kirk, McKelvie, Glasq and Hussein of the British Sudan Medical Service reported 25 cases; 3 of which were unaffected, 8 improved, 7 markedly improved and 7 arrested. Nine of these patients had keratitis which cleared up entirely within one week. Only two of their cases had pannus and both cleared up very slowly. It is interesting to note that this British group bases their trial of sulfanilamide solely on some research work which had shown the value of the drug in healing a meningitis induced in mice by the viris of Lymphogranuloma Inguinale and which showed Rickettsia-like bodies similar to those found in trachoma.

In the ensuing eighteen months there have been published a dozen reports of treatment by the use of sulfanilamide. These bring the total number of cases up to four hundred and eighty-two plus. Perhaps the most satisfactory of these later reports is that of Julianelle, Lane and Whitted of November 1939. They treated a total of 113 cases of which 44 did not respond, 48 were unimproved and 21 arrested. They grouped their cases as follows:

Uncomplicated trachoma: 24 cases: 3 unimproved; 17 improved; 4 arrested.

With predominating corneal symptoms: 24 cases: 2 unimproved; 19 improved; 3 arrested.

With secondary acute infection: 23 cases: (Secondary infection clearing rapidly) 15 trachoma unimproved; 8 improved.

With minor corneal complications: 29 cases: 24 unimproved; 4 improved; 1 arrested.

Flare-up trachoma: 13 cases: All arrested within ten days.

Of the 44 cases unimproved with sulfanilamide, 26 were improved to arrested by subsequent local treatment or by a course of intravenous tartar emetic.

Julianelle summarized the results of foreign writers as follows:

Burnier: 15 cases with type two and three trachoma received grattage and silver nitrate local treatment simultaneously with sulfanilamide. Results were 3 unchanged, 9 improved and 3 arrested.

Busacca: Concluded the drug was of no value.

Wilson: Treated 10 cases of follicular trachoma in children and concluded the drug was of no value.

Burnet, Cuenoid and Natf: Concluded subconjunctival injection is more effective in healing corneal lesions.

Of the 482 cases reported 452 were presented in sufficient detail that they can be tabulated and the results estimated. Of this group, 88 cases or 20 per cent were unaffected, 309 cases or 68 per cent were markedly improved and 55 or 12 per cent were arrested. Most authors agreed that all cases had a marked relief of subjective symptoms as to photophobia, pain and excess tearing. Also there was usually rapid clearing of keratitis and a slower thinning and paling of pannus formation. The action on the lids was slow but many believed that several months after discontinuing treatment follicles continued to absorb themselves. The one report on flare-up trachoma was dramatic as all cases were arrested within ten days.

The various dosages reported have varied from a high of 80 grains a day for a week initially to a low of 20 grains daily for only 14 days. The low dosage given over longer periods apparently obtains results comparable to the higher figures. Many used 1/3 grain per pound body weight a day for 10 days followed by ¼ grain per pound body weight a day for 14 days given with an equal amount of sodium bicarbonate. A blood concentration of 3 mg per cent has been recommended as sufficient. The average duration of treatment with sulfanilamide for the 482 cases reported is found to be 23 days. Some cases were treated for only a week while others were under active medication for as long as four months.

Of the 482 case reports 203 cases were reported in detail as to drug complications, however, all case reports made mention of headache, mild nausea and vertigo not warranting discontinuing the drug. The result of the 203 cases can be estimated as follows:

56 cases or 27 per cent of the group had complications.

15 cases were not itemized.
12 cases had fever.
11 cases severe headache.
10 cases dermatitis.
5 cases cyanosis.
3 cases had nausea, vomiting or vertigo.

It is conclusive that mild symptoms are to be expected as well as uniform drop in hemoglobin and blood count of both red and white cells. The serious complications of blood dyscrasia is usually preceded by unexplained leukocytosis and fever.

Spearman and Vandevere tried sulfapyridine on two cases with complete healing and marked improvement in vision. The dosage used was 7½ grains every four hours. One case which was unimproved after giving over 1000 grains of sulfanilamide cleared up rapidly within ten days upon shifting to sulfapyridine.

Tartar emetic or antimony potassium tartrate has been reported with excellent commendations by two men. Derkac tried it on 50 cases each of which showed rapid absorption of corneal infiltrates, disappearance of pannus and diminution of papillary hypertrophy. Julianelle and co-workers recently reported 40 cases in five series of experimental files. The drug is given intravenously over a period of about a month or until 1 gram has been administered in split doses. A 1 per cent solution is used and 5 cc. dosages are given for a period followed by 10 cc. dosages. No complications of note have been encountered. Of the 40 cases, some adequately treated and some not, 21 were arrested, 7 improved and 2 unimproved. Ten cases were withheld as incomplete, 4 of these received the solution as conjunctival rubs without benefit.

My own experience in chemotherapy of trachoma is limited to but a few cases, however, I was able to obtain data on 12 cases of acute disease by personal communication with Dr. C. G. Stuard of University Hospital. These cases ranged in age from nine years to over sixty. All of them had acute symptoms for three to six months without treatment of consequence. They were equally divided into the three types and nearly all were complicated by pannus, keratitis and acute inflammation of the lids. Four had extensive scarring of the lids and cornea. They received initial dosages varying from 60 to 30 grains according to the intensity of the

condition. Most cases were given 40 grains for two weeks, 30 grains for three weeks and 20 grains for two to six months at whatever intervals they could come in for refilling of their prescriptions. All patients went about their usual duties and none complained of the usual toxic reactions. However, after four months one patient was noted to be cyanotic. All cases were relieved of their photophobia, pain and excess tearing within 24 to 72 hours. Six patients were arrested in two weeks to three months but medication was continued in small dosages in each case. Four patients could be classed as greatly improved and two patients flared up at four to five months mildly.

SUMMARY

1. Sixty-five cases treated intensively on the average of six weeks with local application of 4 per cent silver nitrate solution have been presented and the results of twenty-one months observation tabulated. Thirteen of these cases were classed as unimproved, twenty-three were improved, twenty-nine were classed as arrested trachoma when last seen.

2. From the literature four hundred and fifty-two cases treated with sulfanilamide were reviewed. In estimation of this group about eighty-eight were found to be unimproved, three hundred and nine were improved to markedly improved, fifty-five were definitely stated as being arrested. A brief review of tarter emetic was presented as being about as effective as sulfanilamide.

3. The results of twelve cases of acute trachoma treated extensively with sulfanilamide were reported as all being markedly improved or arrested.

CONCLUSIONS

With sulfanilamide 20 per cent of all cases reported showed no improvement while 80 per cent showed improvement up to arrest. With silver nitrate local treatment 19 per cent showed no improvement while 81 per cent showed improvement up to arrest. The average duration of intensive treatment with the silver was 42 days while that of the sulfanilamide was 23 days.

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Rheumatic Fever: Types, Diagnosis, and Treatment*

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Rheumatic fever is a broad term covering a number of manifestations of a disease which we all admit is not correctly named but for which no one has suggested a better name. Some refer to it as "rheumatic polyarthritis" or "rheumatic infection" and several terms have cropped up in the literature such as "rheumatic granulomatosis," "the rheumatic state," and "rheumatic osis" but none of these has won sufficient support. So, through long usage and because of a no more acceptable term, we still call it rheumatic fever.

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This infection is manifested by a widespread reaction of the tissues throughout the body, in this respect resembling tuberculosis and syphilis on the one hand, and allergy on the other. Due to the protean character of this infection, rheumatic fever may be divided roughly into types and the types may be considered symptomatically and pathologically.

1. SYMPTOMATICALLY

a. Tonsillitis; or other infections of lymphoid tissues in the nasopharynx, and other upper respiratory infections in which the streptococcus plays a part. Certainly tonsillitis, sore throats, and upper respiratory infections are almost as common in this region

as in the northern and northeastern parts of the United States but the great difference in the percentage of cases of rheumatic heart ailments is difficult to explain. Whether the infecting organism is more virulent in the north, whether it is a different strain, whether this organism is more hardy in the north we can only guess.

b. Rheumatism; flitting from one large joint to another associated with swelling, redness, and tenderness, and possibly also associated with rheumatic nodules or erythema multiforme.

c. Chorea; rarely associated with joint manifestations and usually with a small resultant percentage of heart trouble.

d. Growing pains; a vague term and one that we are always told may be a cause of rheumatic heart disease.

e. Lastly, there is that group, although small, in which the etiologic factor would seem to be an indirect allergic response to bacteria or toxins.

2. PATHOLOGICALLY

a. Chronic valvular disease
 (1) Mitral involvement alone 62%
 (2) Aortic involvement alone 5%
 (3) Mitral and aortic involvement 33%
 (4) Tricuspid and pulmonary involvement are very rare
b. Pericarditis—about 7%
c. Myocarditis
 (1) Shown by slight signs in the electrocardiogram in many cases 5%
 (2) Shown by cardiac dilatation or failure or by heart block 5%

In one article it was reported that 58 per cent of the first attacks of rheumatic fever were preceded by respiratory tract infections, and of these precipitating infections, 66 per cent were symptomatic sore throats. On the other hand 37 per cent of the first attacks were apparently clinically spontaneous attacks of rheumatic fever. These researchers found that hemolytic streptococcus infection was associated with most of the first attacks of rheumatic fever, whether or not there were preceding symptoms involving the respiratory tract.

They also found that in the inactive stage of rheumatic fever, sore throats are followed by recurrent rheumatic fever in about one-half of the instances, and almost one-third of the colds are followed by recurrent rheumatic fever. Generally, the chance of a recurrence subsequent to an infection of the respiratory tract decreases as the period of the inactive phase of the disease increases, regardless of the age of the patient. Of the 271 observed recurrences of rheumatic fever, in this article, 67 per cent were clinically associated with infections of the respiratory tract, while 29 per cent were apparently spontaneous. The remaining 4 per cent were clinically associated with infection or trauma outside the respiratory tract.

The diagnosis of rheumatic fever is frequently missed and often very difficult even for the trained observer. The symptoms may be so meager or mild as not to allow of a diagnosis or not force a person to call a doctor. Or a recurrence may be more severe than the first infection and a diagnosis made weeks, months or even years following the first infection.

The typical attack of acute polyarthritis with involvement of one joint after another and complete subsidence of the previously affected part is easily recognized but seldom the case. The response of the fever and the pain to salicylate therapy is fairly characteristic but not pathognomonic. In almost all cases there is an acceleration of the pulse rate beyond the degree of fever. This is an important point in the diagnosis. In practically no other disease is the increase of pulse rate so out of proportion to the degree of fever for so long a time.

The symptoms of rheumatic heart disease depend upon: (1) the activity of the rheumatic infection, (2) obstruction of the circulation resulting from the specific lesions, and (3) heart failure which may come as the result either of overwhelming acute or subacute myocarditis, or of chronic valvular disease, or disturbed heart rhythm, or of two or even all three of these conditions combined. The symptoms of the rheumatic infection include those of any infection but also depend on the reaction of the person to the infecting agent. Joint pains, muscle aches, chorea (rarely combined with joint symptoms), fever, chills (rarely), sweating (sometimes profuse), weakness, effort syndrome, malaise, anorexia, occasionally epistaxis, and loss of color and weight are all symptoms of active rheumatic fever. A low-grade rheumatic heart infection, ordinarily called subacute rheumatic carditis, may set in and last for weeks or months or even years, especially in children, showing itself only by a loss of energy and by the appearance of ill health and a slight elevation of temperature at intervals or daily. Such an occurrence is much more common in children than marked attacks of polyarthritis. Adults are more apt to suffer severe joint pains. Usually, the older the individual the more the joints suffer and the less the heart, while the younger the individual the less the joints are affected and the more the heart. Heart pain is a very uncommon symptom. Dyspnea, when present, is usually due to effort syndrome, but may arise from acute pericarditis or from cardiac dilatation.

There may be nothing but slight enlarg-

ment of the heart with a slight diastolic murmer along the left border of the sternum or a systolic murmur at the apex, found on routine examination; there may be an enormously enlarged heart with several murmurs, absolute arrhythmia, and marked congestive failure; or there may be any combination of signs between these two extremes. Commonly in the child there is a slight to moderate cardiac enlargement with normal rhythm, moderate systolic and middiastolic murmurs at the apex, and sometimes a diastolic blow along the left border of the sternum, without frank congestive heart failure, but frequently with slight fever due to activity of the rheumatic infection.

Rheumatic nodules are an important sign of severe rheumatic infection; their presence indicates that the infection is still active even though they persist or recur for months. They are usually of pinhead to pea size and shape, subcutaneous, and loosely attached to tendon sheathes, periosteum, or joint capsules over elbows, knees, ankles, skull, fingers, wrists, toes, and shoulders in the order named, and usually symmetrically distributed on the two sides of the body.

Erythema multiforme is the most common of the cutaneous signs accompanying rheumatic fever, occurring in about 15 per cent of the cases at some time or other.

The electrocardiogram is often normal but it frequently shows a prolonged P-R interval, delayed auriculo-ventricular conduction time, during the acute infection, and this is a fairly diagnostic sign when present as it is uncommon in other infections; arrythmia; abnormal T waves; intraventricular block; or abnormal axis deviation.

The sedimentation rate is usually increased as it is in most other infections, but it is a reliable guide as to the persistence or absence of the infection. A leucocytosis is always present with an active rheumatic infection. A slight secondary anemia is usual in children. The blood culture is generally negative.

The treatment of rheumatic fever is symptomatic. The results of treatment with sulfanilamide have not been as successful as expected. There is no specific treatment. Vaccines and serums have not proved efficacious. Salicylates come as near being specific as any other form of treatment. They do reduce the fever and joint pains in the rheumatic form but there is no evidence that they influence in any way the amount of heart damage. A dose of 15-30 grains of sodium salicylate with an equal amount of sodium bicarbonate every hour or two until relief of symptoms and of fever, or a toxic reaction has ensued, is sometimes recommended. But such large doses rarely should be given for more than a day or two. For children this dose should be halved.

Rest in bed, a light simple diet with sufficient vitamins, and good nursing care are worth more than most drugs.

The treatment of chorea is no more successful than that of rheumatic fever. Absolute rest and quiet, with good nursing care are more important than other measures. Salicylates, arsenic compounds, vaccines, serums, or other drugs seem to have no specific effect in controlling chorea. In severe chorea, magnesium sulphate in a 25 per cent solution intramuscularly, intravenously, or intraspinally, may have a quieting effect. The barbiturates, ticture of stramonium and continuous baths have also been recommended.

Removal of patients to warm, southern climates from the north during the cold seasons has been found to be beneficial to children showing an active rheumatic fever.

Tonsillectomy is probably advisable in all patients with chronic rheumatic heart disease, provided the heart is in condition to withstand the operation. It is also to be recommended in cases with active rheumatic infection after convalescence has been established. It is probably inadvisable in the acute attack of rheumatic fever. Prophylactically, routine tonsillectomy has been disappointing; there has been little evidence to show that it protects against initial or recurrent attacks. Certainly if the tonsils are enlarged and infected they should be removed along with the adenoid tissue.

Roentgen ray treatment of acute endocarditis and myocarditis has been tried but not in sufficient numbers to draw any definite conclusions. Surgical treatment of chronic rheumatic heart disease is limited to adherent pericardium by thoracolysis, precordial rib resection, and valvulotomy which has been tried in cases of mitral stenosis. Paracentesis must be done for acute pericardial effusions.

Convalescent care of patients with subacute rheumatic infections which lasts sometimes as long as a year or two has become increasingly important. When a child begins to feel well after any illness it is almost impossible to keep him in bed, and, too, the economic angle is very important in most families. Convalescence can be said to have begun when, with the patient at rest in bed, the temperature does not rise above 99 degrees F. by mouth or 100 degrees F. by rectum, the leucocyte count remains below 9,000, the sedimentation rate is normal, the pulse remains below 100, the symptoms and signs of infection have disappeared, the nutrition and general health have improved, and any abnormality has disappeared from the electrocardiogram.

DISCUSSION

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Rheumatic Fevers: Types, Diagnosis, and Treatment

Dr. Roberts has given us a splendid paper. This is an important subject when we stop to think that 95 per cent of all heart disease in children is rheumatic. Over one-third of the cases of heart disease in adults is rheumatic and most of these cases have their onset before 15 years of age and many between 5 and 8 years. Many men feel that the heart is damaged in every case while others are of the opinion that some escape especially during the first attack. The heart is the one organ that may be permanently damaged. As has already been stated, the etiology is not definite. Much work has been done and it is one of the big investigative problems of the day.

SYMPTOMS

The acute fulminating case is easy. Many cases have an insidious onset with indefinite aches and joint pains. Every such case deserves careful consideration. Not all such cases are rheumatic but should be considered as such until it is demonstrated that they are not. This is especially true when there is some temperature and a tachycardia. A careful history will be of great value. Rheumatic nodules are not as common in this section of the country as they are in England and in the eastern part of the United States. We have seen more of them during the past winter than usual.

TREATMENT

Bed rest, salicylates and symptomatic treatment are the best we have to offer at the present. It does very little for some cases while in others it is the determining factor. The patient must remain in bed for some time after all clinical and laboratory data point to no activity. The pulse must be down, temperature normal, white blood count down and sedimentation rate normal. There may be no apparent involvement of the heart but it must be examined carefully at frequent intervals for sometime before we can say that it has entirely escaped damage. Usually the first evidence besides the tachycardia is the mitral insufficiency murmur. Occasionally the aortic may be the first involved or there may multiple lesions. When the child is allowed to sit up in bed he is watched carefully with the pulse as a guide. This is increased slowly. Then he is up in a chair for a few minutes and this period is increased gradually and finally he is allowed to take a few steps. It takes months before the patient is able to resume a reasonably active life. This is carried out along the lines of the regime used for tuberculous patients. It is quite important that the child be kept happy and doing such hand work as he is able. The general condition is to be kept at the highest possible level. All acute infections must be avoided. Such infections, especially upper respiratory infections, may cause a recurrence. The tonsils and adenoids should be removed if they are diseased and are affecting the general condition. They should not be removed just because the patient has a rheumatic infection.

The prognosis is guarded in every case. Many cases can be arrested, especially if recurrences do not result. Chronic rheumatic disease and badly damaged hearts can be kept at a minimum by careful conservative management.

Tinea Capitis*

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Tinea capitis is also known as tinea tonsurans, herpes tonsurans, ringworm of the scalp. It is a fairly common skin affection seen by every general practitioner, and seen often by the dermatologist.

It is one of the superficial mycoses. Eighty per cent or more of the cases are due to a microsporon or small spored fungi, either of the animal type or human type. In some parts of the United States one type prevails and in other parts the other type prevails. In most parts of the southern and western states the animal type prevails. Jacobson says that the animal microspora are the organisms most frequently responsible for ringworm of the scalp in children in this country. The remainder of the cases are due to a scattering of micro-organisms.

Tinea capitis is almost always seen in chil-

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dren before the age of puberty. It is very rarely seen in an adult for the first time. It is usual for it to disappear soon after the age of puberty, even without treatment. This should be taken into consideration in treating a case near puberty, especially if we are considering using X-Ray or thallium acetate for epilation.

The animal type is contracted principally from kittens. It is interesting that this type in animals, as in children, is found in the young. In the larger congested centers and in orphanages, you see many cases of the human type.

The infecting micro-organism first invades the stratum corneum, later enters the hair follicle and finally attacks either the superficial or deep parts of the hair. If we see a child with one or more scaly patches on the scalp, with broken off hairs, we first think of ringworm. The scales are whitish or grayish. The hairs are loosening, dry, and brittle. Usually most of the hairs in the patch are broken off. The patches vary in size from smaller than a dime to the size of a dollar. There may be only one or two patches or there may be many.

In making your diagnosis, if you see a child with a patchy loss of hair, with stumps of hairs in the patches, call it ringworm till you prove it otherwise. Pull out some of the broken off hairs, put them on a slide, cover with ten to twenty-five percent potassium hydroxide, heat slowly in a flame, put on a cover glass and press down. First use low power of microscope, then high dry. The fungi are easily found. An ultraviolet lamp with a Wood's filter is of much help, especially in determining how widespread the infection is, and in helping one to determine when the case is cured. In a dark room with this light the infected hairs will fluoresce with a greenish color. Some of the conditions that may be confused with ringworm of the scalp are psoriasis, alopecia areata, and seborrheic dermatitis. Psoriasis is fairly uncommon in children. The scales in psoriasis are silvery white, and are piled up thickly. Removal of the scales leaves bleeding points. Falling out of the hair is exceptional and broken off hairs are absent. In alopecia areata the patches are smooth and shiny, no scaling, no inflammation, and the hairs are out. In seborrheic dermatitis the scales are either dry, fine and bran-like and not adhered to the scalp, or may be greasy and form crusts which become thickly adherent to the underlying scalp. You do not find broken off hairs.

Prognosis: Most cases will clear up at puberty without treatment, but it is not wise to defer treatment, unless you are dealing with the human type, and the child is near puberty. By using X-Ray for epilation in the human type, and the proper use of medicines locally in the animal type, most cases are well in three to six months.

Treatment: Cultures will tell us the type of infection. If it is the human type, a complete epilation with X-Ray after the method of MacKee and others is the best method. This of course is followed by local applications of three to five per cent ammoniated mercury ointment. To attempt epilation with X-Ray one should have had special training, his machine standardized so that he may know exactly how much X-Ray he is giving. I do not think it wise to give thallium acetate for epilation, as it is very toxic and must be used with great care. In the animal type, the one commonly seen, it is not necessary to epilate with either X-Ray or thallium acetate. The hair must be clipped or shaved. Various local applications have been suggested. Ten per cent ammoniated mercury ointment, ten to fifteen per cent sulphur ointment, iodine ointment or tincture of iodine, iodine crystals in goose grease. The entire scalp should be washed once daily with soap and water. Take some time each day to pull out loose hairs. In the February number of Archives of Dermatology and Syphilology, Spiller, Sharp, and John have an article on treatment of ringworm of the scalp with gentian violet. Their formula is two per cent gentian violet and ten per cent salicylic acid in ninety-five per cent alcohol. This is applied daily. The child should wear a cap made of linen or cotton, which can be changed every day and sterilized. These cases should be checked carefully with ultra-violet, before they are dismissed as well.

Discussion

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Tinea Capitis

I want to compliment the essayist on his clear concise paper on a very interesting subject. He has stressed the dangers of using thallium acetate for epilation. At present I do not know of any American dermatologist using this drug. X-Ray epilation is of course only used as a last resort and then after much careful consideration. Manual epilation by tweezers is very good treatment, especially of the diseased areas. The hairs come out easily and under the Woods filter the diseased hairs are easily seen.

We are fortunate here in Oklahoma in that the tinea capitis that we see is practically all of the animal variety, due to the microsporon lanosum, and it will respond to local medication and never requires X-Ray epilation. There is no practical way except by culturing of the fungus to differentiate the animal and the human type.

EDITORIALS

A PATRIOT'S REWARD

The present criminal indictment of the American Medical Association by the United States Department of Justice, recently upheld by the Supreme Court, and the New Deal's attitude toward the medical profession, including the proposed trends toward regimentation and socialization of medicine, can mean only profound ignorance or gross ingratitude.

The present high rating of personal and public health in this country is supported by a creditable list of medical martyrs, men who voluntarily gave life in order that we might be protected from deadly epidemics. There is a much larger list of medical men who lived to give freely of their energy and skill for the safety and security of society and the welfare of their country.

In order to make their services more effective, the American Medical Association was organized in 1847. In the preamble of its Constitution, we find the following declaration of purposes: "For cultivating and advancing knowledge; for elevating the standard of medical education: for promoting the usefulness, honor and interests of the medical profession; for enlightening and directing public opinion in regards to the duties, responsibilities and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those engaged in it."

In 1901 the "duties, responsibilities and requirements of medical men" were replaced with "the broad problems of hygiene," thus more definitely declaring our responsibility to society. For more than one hundred years the American Medical Association as a democratic body, has served this great American democracy. It has always stood for the public weal and was directly instrumental in the establishment of the Department of Public Health. The American Medical Association, through its Council on Medical Education cleaned house within its own ranks, eliminated the incompetent and elevated the standards of medical education so that the people of the United States might have the best possible medical service. Such a house cleaning in governmental ranks might develop a few more genuine statesmen, eliminate a great deal of red-tape, lost motion, and unnecessary cost, and, most of all, restore national confidence.

Through the Council on Pharmacy and Chemistry, the American Medical Association has given the public protection against the fraudulent claims and dangerous practices of the manufacturers of patent medicines. The Council on Defense of Medical Research has carefully guarded the priceless blessing of animal research. A detailed account of all the services offered by the America Medical Association during the past century would fill volumes.

It has been the business of this organization to keep aloof from political controversy, but it has always been interested in legislation having to do with public health and medical welfare. Consequently, its Committee on Medical Legislation has repeatedly rendered valuable services. As examples of past accomplishments, we might cite its effective opposition to the Antivivisection Bill before Congress many years ago, and the Committiee's valiant support of the Food and Drug Act, as well as many other public health measures.

Recent organized efforts on the part of the national, state and local medical groups to bring about a more equable distribution of medical service, and the present generous attitude of the American Medical Association toward medical preparedness, reveal an abiding loyalty and patriotism among the members of the medical profession which cannot be destroyed by political injustice.

In his presidential address before the American Medical Association in 1910, Wm. H. Welch said: "Organized effort is a distinguishing mark of modern civilization. It is as essential for the advancement of science, of education, of social and industrial reform, of philanthropic endeavor, as for the promotion of commerce. With the remarkable progress of medical science, especially during the last three decades, man's power to control disease has been vastly increased, and the sphere of usefulness of the physician has been correspondingly widened, and with advancing knowledge will continue to expand. The skill and knowledge of the physician and sanitarian have acquired a new and ever increasing importance and significance in the movements for social amelioration, for improvement of the conditions of labor and of living, for the conservation and most efficient utilization of the productive energy of the world, and for the reclamation of regions now yielding no return to civilization.

"Among the organized forces for advancing the prosperity, the happiness and the well being of the people of this country, the American Medical Association has an important part to play. We are justified in the confidence that, with the united support and loyalty of the profession, this association, broadly representative and standing for the best ideals of medical science and art and for professional and civic righteousness, will contribute a beneficient share to the working out of our national destiny."

The last paragraph of the above quotation might well be considered a prophecy which has been fully realized. Medicine has contributed its "beneficent share." It has not only made possible healthful existence under difficult modern conditions, it has given us the greatest life expectancy, the highest health level, and the lowest mortality in the history of the world. It has given the people of the United States, including the law makers and administrators in Washington, adequate protection against practically all epidemic and other deadly diseases. Thanks to Theodore Roosevelt, who listened to medical advisers, it made possible the building of the Panama Canal in the face of shortsighted opposition to General Gorgas's effective methods of sanitation. It has kept the high seas open in spite of improved methods of transportation which have exposed all nations to varied sectional and racial pathological conditions.

H. G. Wells, though not a scientist, writes as follows: "When the intellectual history of this time comes to be written, nothing, I think, will stand out more strikingly than the empty gulf in quality between the superb and richly fruitful scientific investigations that are going on and the general thought of other educated sections of the community. I do not mean that scientific men are, as a whole, a class of supermen, dealing and thinking about everything in a way altogether better than the common run of humanity, but in their field they think and work with an intensity and integrity, a breadth, a boldness, patience, thoroughness, fruitfulness, excepting only a few artists, which puts their work out of all comparison with any other human activity. In these particular directions the human mind has achieved a new and higher quality of attitude and gesture, a veracity, a self-detachment and self-abrogating vigor of criticism that tends to spread out and must ultimately spread to every other human affair."

Pasteur, a true scientist, wrote: "In our Century science is the soul of the prosperity of nations and the living source of all progress. Undoubtedly the tiring discussions of politics seem to be our guide—empty appearances! What really leads us forward is a few scientific discoveries and their application."

Considering medicine's contribution to national welfare, the following question naturally arises. Is it the hand of gross ingratitude, bent on political expediency, or is it the powerful arm of ignorance that wields the ax? If the doctors do not enlighten the people, the ambitious Aarons may convert the golden egg into a molten calf, which will enslave the medical profession and curse an innocent public.

The following from Bismarck, who founded socialized medicine in Germany, plainly reveals the politician's designs and the unsuspecting participant's embarrassing plight. "A beginning must be made with the task of reconciling the laboring classes with the State. Whoever has a pension assured to him in his old age is much more contented and easy to manage than the man who has no such prospect. Compare a servant in a private house and one attached to a Government office or to the Court; the latter, because he looks forward to a pension, will put up with a great deal more."

If man continues to be the noblest creation of God, doctors must not only offer him a sound body, but they must help preserve the spiritual, moral and social values. In other words, the doctor must become a profound psychologist and a skilled interpreter of environment, including the hazardous functions of government.

The final question—how much should we put up with? The Publicity Committee of the State Medical Association should employ every possible medium through which the facts may be conveyed to the people. There is hope in the thought that only an unenlightened public is grossly gullible.—L. J. M.

AUSTIN A. HAYDEN

There has been no officer of the American Medical Association more loved and appreciated by the physicians of Oklahoma than Dr. Austin A. Hayden. He has made repeated trips to this state to address our membership. He has discussed scientific subjects and medical organization and was considered authority in either line. We have always felt that we received from him great inspiration and enlightenment.

His personality was of a sort that appealed to men; his smile and kindly manner brought to him hosts of friends. His untiring labors for organized medicine made him a man honored by the profession.

On July 10, 1940 he was called from this life, on July 12 High Mass was celebrated for our deceased friend. He lives with us now in the work he has accomplished and the memory of the hours spent in his association. Oklahoma physicians will miss him greatly.

• THE PRESIDENT'S PAGE •

Every facility of the Oklahoma State Medical Association has been offered to the American Medical Association's Medical Preparedness Committee. The mobilization of the medical profession is as vital to the defense of our nation as is the building of airplanes, guns, and tanks. Medicine will fight on every front and will be the bulwark of strength for the people to meet any emergency. Health is as important to industry, business and the right mental attitude as it is to any war machine. Public health agencies and organized medicine, from the specialists to the general practitioners, must correlate their efforts. Now, as never before, must medicine utilize its every resource and skill to advancing and preserving the health of the people of the United States.

Since June of this year, when the Medical Preparedness Committee of the A. M. A. came into being, further organization of the profession has continued. Each corps area of the Army and Navy has a member on the original Committee who will act as coordinator for the states in his area. Every state medical association has its Chairman, and it is now squarely up to the county societies and their members to respond as they have always done in every emergency.

Some time ago, the A. M. A. mailed a questionnaire to every licensed physician in Oklahoma. At the time this is being written, only 959 out of 2,353 of these mailed into this state have been completed and returned to the Committee. The information to be gained from these, properly answered, is vital to preparedness. If you have not completed and returned the questionnaire please do so at once. If you did not receive one or if you have misplaced it, please advise this office and another will be sent to you immediately. Should you have difficulty in answering the questions, let us know and we will try to help you.

Remember: In response to a similar appeal, 90 per cent of the members of the Canadian Medical Association volunteered their services within three weeks' time. Surely, we can do as well. Don't delay—return your questionnaire TODAY. Let's make Oklahoma 100 per cent.

Henry N. Turner

President.

Note: Since the June 22 issue, the Journal of the American Medical Association has devoted each week a section to Medical Preparedness, which contains information useful to the medical profession. Be sure and read these comments.

ASSOCIATION ACTIVITIES

Medical Preparedness Activities Start in State

Dr. Henry H. Turner Named To State Chairmanship

The American Medical Association's recent reqnest to each state medical society for appointment of one of its members as state chairman of medical preparedness work to work with the National Committee on Medical Preparedness, has been answered by the Oklahoma State Medical Association through its Council with the recommendation of Dr. Henry H. Turner for that position.

Coordination of the activities of the national committee in each component association will be the dnty of each state chairman, the Medical Preparedness Committee pointed ont. The chairman will be directly responsible to the A. M. A. committee member from the state's corps area, who in Oklahoma's case is Dr. Samuel E. Thompson of Kerrville, Texas, representative of the eighth corps area.

Actually, the functions of the state chairmen will be but an extension of those carried on by the national committee. Contact with other state chairmen in the vicinity will be made throngh the corps area representative, and contact also will be maintained through this source with the headquarters of the National Committee on Medical Preparedness.

As ontlined by the national committee, the functions of a state chairman include the following:

1. Contact with and coordination of the activties of state, county and district medical societies.

2. Cooperation with connty medical societies in securing completion and return of the questionnaire on personal information.

3. To establish mechanisms for securing supplementary information to the questionnaire when necessary.

4. To organize a state committee on medical preparedness to be composed of the president and the secretary of the state medical society, the state chairman for the Committee on Medical Preparedness and ex-officio the member of the Committee on Medical Preparedness of the American Medical Association within whose corps area the state is located and such other members as this group may select.

5. To assist in the organization of county committees on medical preparedness.

6. To invite local and state health anthorities to participate in the work of the program particularly in the matter of civilian health.

7. To arrange for the dissemination of information on medical preparedness to the groups that are concerned with any particular matter.

8. To assist in the verification of the qnalifications of physicians desired for service in the Army, indnstry, special physical examinations and other special work necessary for national defense.

9. To report to the Committee on Medical Preparedness a list of the names of physicians from each county of the state whose services are believed to be necessary for the maintenance of civilian health and who should, in the opinion of the state committee on medical preparedness, be exempt from military service.

Appointment of the other members of the Committee for the state will be announced as soon as possible.

Together with this information, word has been received from Dr. Olin West, Secretary and General Manager of the American Medical Association and likewise Secretary of the National Committee, to the effect that he has received information from the office of the Surgeon General of the United States Army that in all probability the age limit for physicians who may be called for military duty will be fifty-five years. It is possible, he said, that the services of some physicians above the age of fifty-five may be used for special purposes, and it is thought that some physicians of an age less than fifty-five, inclnding those in the lower age groups, may be assigned to dnties concerned with service to civilian gronps.

Medical Preparedness Committee Issues Questionnaires

As a part of the plan for preparedness of the medical profession to enable the nation to meet any emergency which might arise, the Committee on Medical Preparedness of the American Medical Association is sending out questionnaires to each licensed physician in the United States and its territories, it has been announced in The Jonrnal of the Association. The qnestionnaires are being sent out at the request of the Surgeon Generals of the United States Army, Navy and Pnblic Health Service.

Upon receipt of the filled-in questionnaires in the A. M. A. offices, the information will be transferred to cards in a punch card system so that it will be possible by the nse of the usnal machine to make a selection of physicians capable of serving in various military, naval, industrial or civil capacities, The Journal stated.

Issuing a plea for cooperation, the Committee asked for an early return of the questionnaires, stating that, as physicians are needed, an attempt will be made to furnish them through this means, while if conscription becomes necessary, every effort will be made to assign the doctors to the work for which they are especially suited.

Ophthalmology Examination Dates Announced by Board

According to an announcement by the American Board of Ophthalmology, only one written examination in that specialty will be given during 1941. This will be held in varions cities throughont the country.

Candidates enrolled in the Preparatory Group who have been advised that they will be eligible for examination during 1941 should make application at once to take this written examination. Application must be made on the regular blanks provided for the purpose and must be received in the Board Office, 6830 Waterman Avenne, St. Louis, Mo., before December 1, 1940.

Oral examinations will be held in May or Jnne in Cleveland, and in October, this place to be annonnced later. Deadlines for case reports are February 1 and July 1.

A special oral and clinical examination will be held on the Pacific Coast during 1941 providing there will be enough candidates to warrant it. Applications for this examination should be filed before September 1, 1940, so that the Board may complete necessary arrangements.

Resolutions Adopted By House of Delegates

As announced in the July issue of The Journal, the resolutions adopted by the House of Delegates at the Annual Meeting of the Oklahoma State Medical Association in Tulsa, Okla., May 6, 7, and 8 are hereby published.

Clinical Pathology

WHEREAS; The practice of clinical pathology has been officially recognized by the American Medical Association as a specialty of medicine; and

WHEREAS; The future of this specialty is being seriously jeopardized by several factors, chief of which is the activity of various governmental agencies in providing various types of laboratory services to the people irrespective of their ability to pay; and in certain parts of one state, service is offered to both sick and well, in the home and in the hospital, day and night, including not only laboratory examinations of public health interest, but tissue examinations, basal metabolisms, electro-cardiographs, etc.; and

WHEREAS; Complete socialization of pathology in some areas of this country may be only the forerunner of the complete socialization of clinical medicine; and

WHEREAS; Most State Health Department and nearly all officials of the Federal Government interpret paragraphs two and three of Section XV, Supplement 10 of the United States Public Health Service, (Control of the Venereal Diseases in the United States), on the basis of paragraph three, which reads as follows:

"Free diagnostic and treatment facilities shall be provided by all health departments or clinics receiving funds under this act for (a) the diagnosis and emergency treatment of all patients who apply; (b) all patients referred by a private physician either for continued treatment or for consultative advice and opinion; and (c) all patients unable to afford private medical care. The determination of the ability of patients to pay for private medical care shall be the responsibility of the state or local health department or constituted welfare agencies within these areas. Clinics collecting fees from semi-indigent patients shall not receive assistance under this act unless such fees are used solely by the venereal disease clinic for improvement of diagnostic and therapeutic services rendered therein", and

WHEREAS; This interpretation, if generally followed, will result in such a curtailment of private and hospital pathologic laboratories that many will have to be abandoned. The loss of widely distributed pathologic laboratories and their services would be a definite detriment to all concerned, including the patient; and

WHEREAS; The United States Public Health Service has recently applied a new interpretation to these paragraphs on the basis of the literal wording of paragraph two, which places the laboratory services for the control of venereal diseases on the same basis as such services for other communicable diseases. Paragraph two reads as follows:

"The state laboratory and any local laboratory receiving funds under this act shall provide laboratory services for the venereal diseases on the same basis as such service is provided for other communicable diseases. No state department of health shall be entitled to receive payments under this act unless such laboratory services are provided within that state."

and

WHEREAS; On the basis of this interpretation, the Kansas State Board of Health formulated the following resolution:

"The Kansas State Board of Health hereby instructs the state laboratories to furnish laboratory service for diagnosis of all communicable diseases at public expense to all state and county board of social welfare clients, social types of public assistant clients: to all inmates or patients of federal, state, county, or municipal institutions and homes: and to all other residents of the state of Kansas who find it difficult or impossible to pay the costs of laboratory service of this kind in the usual and customary manner." and

WHEREAS; The United States Public Health Service approved said Kansas resolution as evidenced by the following letter:

FEDERAL SECURITY AGENCY
U. S. Public Health Service
Washington, D. C.
November 29, 1939

Dr. F. P. Helm, Secretary
State Board of Health,
Topeka, Kansas.

Dear Dr. Helm:

I have your letter of November 23d and the copy of the resolution which was passed by the Kansas State Board of Health at a special meeting held November 22d.

The action taken by the Board places laboratory tests for venereal diseases in the state of Kansas on the same basis as such services are provided for other communicable diseases, and meets the letter of the Surgeon General's Regulations Governing Allotments and Payments to the States for Venereal Disease Control Activities for the Fiscal year 1940, as set forth in paragraph 2, section 15.

Sincerely yours,
R. A. Vonderlehr,
Assistant Surgeon General,
Division of Venereal Diseases.

Therefore, be it

RESOLVED; That the Oklahoma State Medical Association, recognizing the fact that socialization of pathology might be the forerunner of complete socialization of clinical medicine, requests the Oklahoma State Health Department to instruct the state laboratories to furnish laboratory service for diagnosis of all communicable diseases at public expense to all state and county boards of social welfare clients, social types of public assistance clients; to all inmates or patients of federal, state, county, or municipal institutions and homes; and to all other residents of the state of Oklahoma who find it difficult or impossible to pay the costs of laboratory services of this kind in the usual customary manner.

The Oklahoma State Medical Association also requests the State Health Department to instruct the state laboratories to provide laboratory service, at public expense and without requirement of request forms, to all county and city health officers, all employees of the Oklahoma State Board of Health, and all staff members of federal, state, county, and municipal institutions and homes who desire to utilize the services of the state laboratories in conjunction with their official duty, and to revoke all regulations in conflict therewith.

Third Party Lien Law

WHEREAS; There exists in many states of the United States a law commonly known as a third party lien law, and

WHEREAS; Many members of our Society caring for a person injured are deprived of their rightful fees, and

WHEREAS; If a third party lien law should exist in Oklahoma, the attending physician would have a legal lien against any settlement between the injured party and the injuring party,

Be it

RESOLVED; That the Legislative Committee of the State Association be instructed to make this a matter of business with sincere endeavor to secure such a law for Oklahoma.

University of Oklahoma School of Medicine

RESOLVED; That this Association desires to record its interest in the welfare and progress of the University of Oklahoma School of Medicine. In spite of the limited financial support the school has received, it has made a



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record which is a credit to the State. The Association requests that this institution receive adequate appropriations at the hands of future State legislatures so that it may continue to advance and keep abreast of the progress of medical educatiou.

And be it further

RESOLVED; That a copy of this resolution be sent to the Governor of the State and at the time of the next meeting of the State Legislature to the Speaker of the House and to the Presideut Pro Tem of the Senate.

Forty-Eight State Physicians Attend A. M. A. Sessions

Oklahoma was well represented when physicians from over the world conveued in New York City for the annual session of the American Medical Association in June.

Physicians attending from this state were: E. R. Muntz, Ada; John R. Reid, Altus; W. A. Howard, Chelsea; W. Turner Bynum, Chickasha; H. N. Sisco, Chilocco; Richard M. Burke, Paul B. Lingenfelter and McLaiu Rogers, all of Cliuton; J. Sherwood Jacoby, Comuerce; Douovan Tool, Edmond; George T. Ross, Evelyn Rude, both of Enid; Robert F. Loughmiller, Walter Frauz Vou Belinski, both of Fort Sill; Edward D. Greenberger, McAlester; Charles Ed White, Muskogee.

William H. Bailey, Ray M. Balycat, John Y. Battenfield, C. P. Bonduraut, A. M. Brewer, Anson L. Clark, Paul C. Colonna, H. E. Doudna, William E. Eastland, E. S. Ferguson, E. Goldfaiu, Wayue M. Hull, John H. Lamb, Earl D. McBride. Ralph E. Meyers, Robert U. Patterson, Horace Reed, C. R. Rountree, Edward N. Smith, Heury H. Turner, and Phil E. White, all of Oklahoma City; Galviu L. Johnson, Pauls Valley; A. C. McFarling, Shawnee; Howard L. Puckett and Wildridge Clark Thompson, both of Stillwater; J. C. Braswell, W. Albert Cook, Harry Green, I. A. Nelson, and H. B. Stewart, all of Tulsa; W. R. Marks, Vinita; and Myrou C. Englaud, Woodward.

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Neurological Surgery Exams Announced

The American Board of Neurological Surgery will hold its first examination to certify candidates at the Uuiversity of Illiuois, 804 South Wood Street, Chicago, October 18-19. Application forms and copies of the charter and by-laws may be obtaiued from the secretary, Dr. Roy Glenwood Spurling, 404 Brown Building, Louisville, Ky.

WARNING

Dr. Sam A. McKeel of Ada has advised the Executive Offices that there is a man contactiug doctors over the state representing himself to be Dr. McKeel's son. This man who, in the majority of cases gives the uame of Fred McKeel, is asking doctors to cash small checks for him. He speaks about his brother, John Boyce McKeel, and apparently knows a good deal about Dr. McKeel's family.

Dr. McKeel is anxious to have every doctor know that he has but one son, Senator Johu Boyce McKeel, who resides in Ada and is a member of the legal professiou.

Should this mau contact any member of the medical professiou, every effort should be made to place him in the hands of local authorities, as he is wanted in several cities of the state.

Announces Fellowships in Psychiatry

The National Committe for Mental Hygieue announces that a limited uumber of fellowships have been provided by the Commouwealth Fund and other source for traiuing in extramural psychiatry, especially chil psychiatry.

The committee is to assign fellows for one or tw years at a selected child guidance clinic, the term an plan of the fellowship to be determined by the needs o each fellow.

Candidates for these awards should have had at leas two years of psychiatry in an approved mental hospita iu addition to other qualities fitting them for extra mural service. Accordingly, other conditions as to ag sex and marital status must be governed by individua cases and by current demand. Requests for further in formation should be addressed to Dr. Milton E. Kirk patrick, National Committee for Meutal Hygiene, Roo 822, 50 West Fiftieth Street, New York.

New chief of the medical staff of the Muskoge U. S. Veteraus Bureau is Dr. H. C. Hardegree, wh assumed his duties June 19. Dr. Hardegree, who cam to Muskogee from Kecoughton, Va., replaced Dr. Charle L. Magruder, who left to become chief of the medica staff for the new Veteraus Hospital in Dallas, Texas The uew chief of staff is a fellow of the America Medical Associtiaon, member of the Clay County, Mo and Missouri State Medical Societies, and a member o the Peninsula Academy of Medicine of Virginia.

Appointment of Dr. H. H. Riddle of Coweta a Wagoner County health officer, effective July 1, ha been aunounced. Dr. Riddle, a former county healt officer, succeeded Dr. W. R. Joblin of Porter.

Dr. E. L. Collette, Jr., of Dewey, who has been locate in Dewey for the past year, left late in July for Cleve land, Ohio, where he has accepted a position as surgeo in the Children's Hospital.

Dr. Clark Hall, Oklahoma City physician, has bee appointed chief of staff for the new convalescent hom of the Crippled Children's Hospital. The home in Bet any was opened in July by the Children's Welfar League. The convalescent service was adopted by th league which formerly conducted a home for depender children, to release beds in the hospital for urgent case The home has a capacity of 30 beds.

Physicians Casualty Association Sets Enviable Record

A record of more than $5.00 paid for claims to each $1.00 used for the entire expense of operation has been established for the past year by the Physicians Casualty Association and Physicians Health Association, according to a report received from the association's office in Omaha, Neb.

The report, taken from the annual report rendered to the State Insurance Department, reveals that the associations achieved the following record:

Total income	$ 922,118
Paid for Claims	640,302
Entire Expense	124,514
Net Surplus	1,676,946

The associations' membership is limited to ethical practicing physicians, surgeons, and dentists.

Venereal Disease Information Valuable Aid

Venereal Disease Information, published monthly by the U. S. Public Health Service, presents a monthly digest of the important papers on diagnosis, treatment, pathology, laboratory research, and public health from the entire world. In addition, it publishes important special papers and reports by leading scientists. It is designed to keep both the specialist and the general practitioner informed of developments in the field of syphilology and urology.

This medical journal of venereal disease has been highly recommended by leaders in all fields of public health. In a rapidly developing and changing field of medicine, the physician interested in venereal disease control from the standpoint of differential diagnosis and treatment will find Venereal Disease Information an important aid.

All order should be directed to the Superintendent of Documents, Government Printing Office, Washington, D. C. Subscription fee is 50 cents per year.

Insurance Company Figures Show Mortality Rate Decrease

A decrease in the rate of mortality from all causes for the first five months of 1940 from the same five months during 1939 has been shown in figures released by the Metropolitan Life Insurance Company.

The rate dropped from 8.48 per 1,000 policyholders in January through May of 1939 to 8.24 per 1,000 over the same period in 1940. While a definite lowering of the monthly rate in July, August, September and October in 1939 brought the entire year's rate down to 7.65 per 1,000, only the first five months have been used for the sake of comparison.

Osler Memorial Building Dedicated

The old autopsy house where Osler worked at Blockley has been restored as the Osler Memorial Building, and was dedicated on the grounds of the Philadelphia General Hospital, at Curie Avenue, near 34th and Pine Streets, Philadelphia, Pa., at 2 p.m. on June 8, 1940.

Original furnishings, including the necropsy table, have been collected. The paintings by Dean Cornwell, N. A., of New York, entitled "Osler at Old Blockley," was on exhibition during the celebration.

There are facilities in the building for the housing and preservation of relics of Old Blockley, as well as Osleriana. The Committee would welcome any additions to this collection.

New Orleans Has New District Health Unit

The U. S. Public Health Service has established a permanent health district unit with headquarters in New Orleans, it has been announced. The unit will supervise public health service work in Texas, Louisiana, Florida, Alabama, Georgia, Mississippi and Tennessee. Dr. Charles L. Williams, assistant surgeon general, U. S. Public Health Service, will be in charge of the unit.

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*"Treatment of Acute Anterior Urethritis with Silver Picrate," Knight and Shelanski, AMERICAN JOURNAL OF SYPHILIS, GONORRHEA AND VENEREAL DISEASES, Vol. 23, No. 2, pages 201-206, March, 1939.

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News From The State Health Department

With the support of the medical societies, public officials and interested citizens, the Oklahoma State Health Department will provide full time local health services in 36 counties during the fiscal year which began July 1, Dr. G. F. Mathews, Commissioner, has announced.

The growth of organized preventive medicine in Oklahoma is indicated in the announcement that eight counties will have local health departments for the first time.

The full-time, local health department is the basic form of practical public health, with trained personnel working day by day in a local area, meeting the problems as they arise, knowing and working with the residents of the county. Where such units are in operation there is a complete public health program carried on, with the state organization functioning in the area only in times of emergency.

During the fiscal years which ended July 1, Oklahoma had 29 full-time health departments in operation, and all but one county have approved budgets for the new year.

The counties which will have new health departments are: Roger Mills, Coal, Atoka, Creek, Caddo, McClain, Logan and Bryan.

Roger Mills county will be joined with Ellis county to form a new district. Ellis county has had a full-time local health service in the past, in a joint department with Woodward and Harper counties. These two counties will operate together this year, it was announced.

Bryan county is leaving its affiliation with Marshall and Love counties, which comprised a district, and will maintain a single county department, according to recently announced plans. Love, Marshall and Johnston counties will function as a district.

A new district will be established in southeastern Oklahoma, consisting of Coal and Atoka counties. Addition of these two counties gives the entire southeastern section of the state an organized public health program.

Single county departments are being established in Creek, Caddo, McClain, Logan and Bryan counties, with headquarters at Sapulpa, Anadarko, Purcell, Guthrie, and Durant, respectively.

In each county local funds were set aside by the county commissioners, to be matched by the State Health Department to provide finances needed to carry out the program.

The full-time local health department does only preventive work, based on education of the public toward ways of healthier living. Public health units do no curative practice, instead work with the private physician, referring the public to the physician in cases where corrective work is needed, it was pointed out.

Oklahoma's campaign to control syphilis and gonorrhea will be expanded and improved during the fiscal year which began July 1, Dr. G. F. Mathews, commissioner of the Oklahoma State Health Dpartment, has announced.

Since the allotment of federal funds made a generalized program possible in Oklahoma in 1938, planned clinics for the treatment of syphilis have been established in 48 cities.

Beginning shortly after July 1 the number of clinics will be increased to 59.

Over 5,000 patients who are indigent or referred by private physicians are being treated weekly at the clinics.

The program for this year will stress clinics for venereal disease work which are operated by the full-time local health departments.

Private physicians will be paid to assist health department directors in the larger clinics and clinics will also be operated in cities where there is no full-time health department. Traveling clinicians and nurses will conduct these clinics.

Since January 1, drugs for the treatment of syphilis have been distributed by the State Health Department to clinics and private physicians when requested.

Dr. Eugene A. Gillis, past assistant surgeon, U. S. Public Health Service, is director of the venereal disease program. Dr. Vance F. Morgan, director during the past year, is at Johns Hopkins University School of Public Health, Baltimore, for a year of study in venereal disease control.

The following cities, located in counties with full-time health service, will have venereal disease clinics: Jay, Pryor, Tahlequah, Stilwell, Sallisaw, Boynton, Muskogee, Poteau, Idabel, Hugo, Antlers, Durant, Madill, Marietta, Ardmore, Ada, Konawa, Wewoka, Asher, Seminole, Shawnee, Norman, Oklahoma City, Tulsa, Stillwater, Cushing, Kingfisher, Arnett, Woodward and Buffalo.

The following cities are scheduled to have clinics operating in new full-time health departments: Atoka, Coalgate, Purcell, Guthrie, Langston, Anadarko, Carnegie, Sapulpa, Drumright, Bristow and Cheyenne.

The following cities in counties not served by full-time health departments will have clinics: Nowata, Wagoner, Porter, Stigler, Henryetta, Okmulgee, Okemah, Duncan, Lawton, Altus, Frederick and Enid.

Of these groups, the following are clinics which will begin operation for the first time under plans for the new fiscal year: Buffalo, Aruett, Cheyenne, Healdton, Coalgate, Purcell, Maud, Oktaha, Bristow, Bennington.

University of Oklahoma School of Medicine

When the University of Oklahoma inaugurated a medical school in 1900, it was the purpose of the State to make it possible for citizens of Oklahoma to obtain a medical education in their own State at a minimum of expense, with the desire that after they had graduated they would remain in Oklahoma to enter practice.

Therefore, the objective of the medical school has always been to train young physicians so that they will be *competent general practitioners.* The course of study is of such a character that any who later on wish to take up one of the specialties will have had the scientific background necessary to enable them, with additional training, to enter some particular field of medicine. The majority of the graduates of our School of Medicine are engaged in general practice.

Of the 1,016 graduates of the medical school, about 55 per cent (1) are actively engaged in practice in Oklahoma, in some 200 cities, towns, and smaller communities in every county of the State, except ten. Within a very few years there will be graduates practicing in those ten counties in which no graduate of this school is now practicing, physicians will settle whenever it becomes evident that there is a sufficient population to insure their ability to make a living and support their families. Until those conditions exist no physician reasonably can be expected to locate in such sparsely settled communities. However, even now this does not afford any hardship to people living in lightly settled districts because of good roads and means of communication that exist. Few people in the State are not within reach of medical advice.

Oklahoma has a very good law which requires that no physician may engage in practice until he or she has successfully passed an examination before the State Board of Medical Examiners of Oklahoma, and no physician is eligible to take that examination until at least one year of internship has been served in an approved hospital following graduation from medical school.

Oklahoma also has a Basic Science Law which requires

STUDIES IN THE AVITAMINOSES

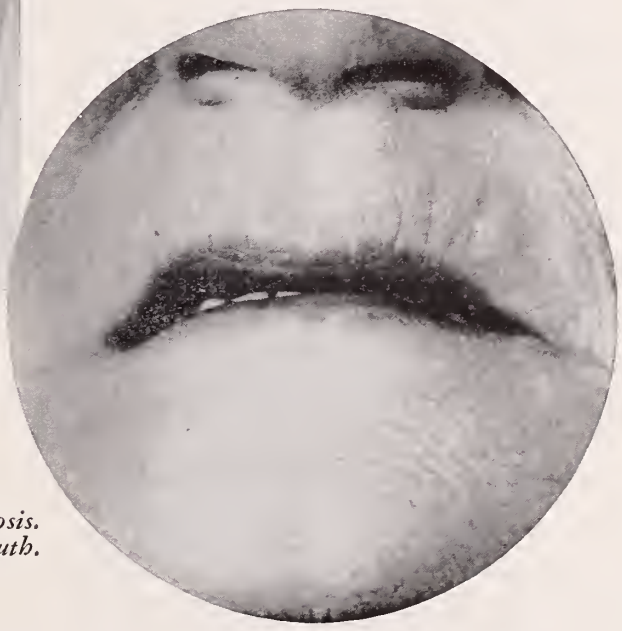


This page is the eighth of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the July 20 issue of The Journal of the American Medical Association.



Coexisting riboflavin deficiency and pellagra, showing cheilitis and the characteristic glossitis.

THE manifestations of riboflavin deficiency in man have been recognized as such only recently. Frequently they occur in conjunction with pellagra, and consequently the characteristic lesions may not be apparent until the pellagra has been overcome.



The cheilitis of ariboflavinosis. Note fissures at angles of mouth.

The Clinical Manifestations of Riboflavin Deficiency

THE most prominent lesion of riboflavin deficiency is a cheilitis characterized by reddening of the lips due to exfoliation of the epithelium, and radiating fissures at the angles of the mouth. There may also be seborrheic lesions in the nasolabial fold and on the alae nasi. According to Krause, Sydenstricker, Sebrell, and Cleckley, riboflavin deficiency produces a magenta color of the tongue. As stated by these investigators, when riboflavin and nicotinic acid deficiencies occur in the same individual, the fiery red tongue of pellagra may change under the influence of nicotinic acid to a magenta color which disappears only after riboflavin therapy.

UPJOHN

that no physician can appear before any licensing Board for practice in the State of Oklahoma until able to present a certificate of proficiency from the Basic Science Board of the State of Oklahoma or some other State. This examination is searching and determines the knowledge in the basic sciences of each person who appears before that Board. No one can pass the examination unless he or she is an educated person and well-grounded in the sciences. These basic science requirements, the necessity of serving a year's internship before appearing before a State Board for a license to practice, the high standards set up for admission to a medical school, and that have to be maintained in order to be able to remain in medical school until graduation, are all set up with one objective; namely, the protection of the public.

Internships following graduation must be served in approved hospitals, that is, hospitals which are approved for intern training by the American Medical Association and the Association of American Medical Colleges which set the standards both for the United States and the Dominion of Canada in these respects. The minimum time requirement for an internship in an approved hospital is one year.

In the University Hospital of the medical school in Oklahoma City the internship is what is known as a "two-year rotating." The two years of service are divided into twenty periods of about thirty-six or thirty-seven days duration each and cover the different branches of medical practice. Naturally, more periods are devoted to general surgery and internal medicine than the others, but definite periods of service are required in Obstetrics, Gynecology, Pediatrics, Orthopaedics, Dermatology, Plastic Surgery, Ophthalmology and Otolaryngology, Urology, Anesthesiology, Roentgenology, and Tuberculosis. Beginning with the fiscal year July 1st, 1941, one of these periods will be devoted to service in a large hospital for "meutal diseases."

The two-year rotating internships are becoming more popular throughout the country, although as yet the majority of hospitals only offer one year of rotating service. At the present time, of the 765 approved hospitals (2) there are 151 which offer two or more years of intern training.

Young physicians who finish their two-years internship in the University and Crippled Children's Hospitals each year, in the opinion of the authorities of the medical school, are much better prepared for general practice than any group which serves a rotating internship for only one year. It is certain that these young physicians when they enter upon practice are competent and safe to render skillful professional service to the citizens of the Commonwealth.

(1) This is much higher percentage than in the case of state university medical schools.

(2) i.e., approved for training of interns out of the large number approved as hospitals.

Group Hospital Service News

Group Hospital Service presents to you the names of some of the firms and organizations which have cooperated in bringing this protection to 7,000 Oklahoma people.

Adams Hotel.
Adams and Leonard.
American First Trust Company.
Beatrice Creamery Co.
Chamber of Commerce, Oklahoma City.
Central Sales Promotion.
Community Fund Agencies.
Crane Company, The
Deep Rock Oil Corporation.
Department of Public Assistance.
East Central State Teachers College.
Fire Companies Adjustment Bureau.
Froug Company, Inc., The
First National Bank, Oklahoma City.
Gates Hardware Company.
Group Hospital Service.
Hale-Halsell Company.
Haskins and Sells.
Hughes Tool Company.
Indian and Forest Service.
Industrial Printing Company.
International Business Machine Corp.
Langston Company.
Lee School.
Leland Equipment Company.
Liberty Mutual Insurance Company.
Maloney Tank Company.
Massachusetts Mutual Life Ins. Co.
Mayo Furniture Company.
Medical and Dental Assistants.
Moorlane Company.
National Bank of Commerce.
National Bank of Tulsa.
Northwestern Mutual Life Ins. Co.
Northwestern State College.
Oilwell Supply Company.
Okla. Coca Cola Bottling Co.
Oklahoma County Medical Assn.
Okla. District Headquarters C.C.C.
Oklahoma State Health Department.
Oklahoma State Medical Assn.
Osage Indian Agency.
Pacific Mutual Life Ins. Co.
Penney, J. C. & Company.
Retail Merchants Association.
Rothenberg & Schloss.
Sears, Roebuck & Company, Tulsa
Sears, Roebuck & Company, Oklahoma City.
Seidenbach's, Inc.
Skelly Oil Company.
Spartan School of Aeronautics.
Spartan School of Aeronautics—Army Division.
St. Anthony's Hospital.
Sutherland Lumber Company.
Texas Company, The
Tide Water Associated Oil Co.
Tulsa Chamber of Commerce.
Tulsa County Dental Society.
Tulsa County Medical Society.
Tulsa Daily World.
Tulsa Federal Savings & Loan Assn.
Tulsa Public Library.
Union Bus Terminal.
U. S. Bureau of Mines.
U. S. Engineer Office.
U. S. Post Office Employees.
United Brick & Tile Company.
Von Wedel Clinic.
Waite Phillips.
Washington-Nowata County Medical Society.
Wesley Hospital.
Woolf Brothers.
Woolworth, F. W. & Company, Tulsa.
Woolworth, F. W. & Company, Oklahoma City.
W. P. A. Library Service.
Y. M. C. A.

Fifty hospital bills have been paid. The longest hospital stay was twenty-two days and the shortest was one day. The average period of confinement to a hospital has been 7 6/-0 days.

The service is being gradually expanded geographically toward the objectives of statewide service. Enthusiastic community reception has exceeded all expectations. Local medical societies, Chamber of Commerce, civic and service organizations have voluntarily united their sources and influences as a means of public education and of serving their people through this low-cost plan. The establishment of local civic and advisory councils has contributed much to economy, expediency and effective service.

• OBITUARIES •

Dr. Samuel Jacob Fryer
1876-1940

Dr. Samuel Jacob Fryer was born in Fern Creek, Kentucky, on November 20, 1876, was educated in his local schools, and thereafter attended Centre College in Danville, Kentucky, from which he received his Bachelor of Arts degree. He afterward attended Hospital College of Medicine in Louisville, Kentucky, where in 1902 he received his Doctor of Medicine degree.

Doctor Fryer began practice in West Virginia as company surgeon for the Norfolk & Western, Railroad, extending from Bluefield to Cincinnati. He came to Muskogee in 1909 to enter practice, which he continued until his demise on Wednesday afternoon, June 19, 1940, after a prolonged illness. Doctor Fryer was not only a member of the Muskogee County Medical Society, where he had filled many semi-official honors on various committees and assignments, but also was a member of the Southern Medical Association and the American Medical Association. He also served his country as Captain in the World War and was a member of the American Legion. He was a Master Mason, a Shriner, and was an active member of the First Presbyterian Church.

His body was interred in Greenhill Cemetery in Muskogee, with Dr. Walter G. Letham, his pastor, officiating.

Dr. Fryer's passing removed from our membership, associations, daily experiences firstly, a well born gentleman, high class American citizen, honorable, ethical, well-versed able fellow practitioner, colleague, and friend, but one who stood for highest of ideals, practices, and intentions conceivable, so that his unshirking devotion, attention, assistance, efforts, etc., will be greatly missed, his timely good advice felt, in the remaining years we, his survivors carry on.

Therefore, it is the sense, desire and will of the Muskogee County Medical Society that these feeble words of respect, admiration, regret, sympathy, condolence, etc., be extended to his survivors, (wife, son Dr. S. R. Fryer of Oklahoma City, Mrs. Slaughter of Milwaukee, Alice of the home, and a brother, Dr. C. M. Fryer of Louisville, Ky.) in this hour of sadness with the hope that all may obtain solace in his many virtues, and accomplishments, and his present freedom from suffering, believing and trusting in Him on high, who knows and does all things well, that a meeting will be effected in the Great Beyond, where happiness, comfort, satisfaction knows no bonds. The Muskogee County Medical Society, collectively and individually, expresses its sorrow and sympathy to his bereaved, with the wish that a copy be sent the family, also spread upon the meeting's minutes.

I. B. Oldham, Jr., M.D., President
Shade D. Neely, M.D., Secretary
O. C. Klass, M.D., Chairman Necrology Committee.

Dr. Robert E. Thacker
1865-1940

Dr. Robert E. Thacker, widely known pioneer physician of Cleveland county, succumbed to a few weeks' illness July 10 in an Oklahoma City hospital, leaving a host of friends to mourn his passing.

Funeral services were held July 11 at the Thacker home in Lexington, with the Rev. M. A. Cassidy of Caddo officiating, assisted by the Rev. R. O. Stewart of Lexington. The American Legion posts of Cleveland and McClain counties conducted burial rites at Lexington.

Doctor Thacker was born in Henderson County, Texas, living there as a youth and later going to Louisville Medical College, from which he was graduated. He came to Indian Territory in 1889, practicing medicine in Purcell two years before moving to Lexington, where he had lived until his death. He was a major in the medical corps in the World War, was a member of the India Temple Shrine in Oklahoma City, and a member of the American Medical Association as well as the state and county associations.

Surviving are his wife, Mrs. Mary B. Thacker; two daughters, Mrs. Mabel Hobson of Oklahoma City and Miss Grace Thacker of the home.

According to a tribute by friends, one has only to talk with residents of the south end of Cleveland County or across the river in McClain county to know what Doctor Thacker's years of service meant in that section. The doctor, beloved by many, always declined to discuss himself or his practice. He preferred to "raise apples for children to eat" rather than talk about himself. In addition to his practice, he operated an orchard of approximately 130 acres near Lexington.

A number of members of the medical profession in Cleveland and McClain counties served as honorary pallbearers at the funeral rites.

Medical Board Celebrates Anniversary

The National Board of Medical Examiners celebrated the twenty-fifth anniversary of its founding at a dinner at the Waldorf-Astoria, New York, June 12.

The board, founded in 1915 by Dr. William L. Rodman, Philadelphia, has received support from six foundations: Carnegie Foundation for the Advancement of Teaching, Rockefeller Foundation, Commonwealth Fund, Milbank Memorial Fund, General Education Board and the Carnegie Corporation. Its certificate is now accepted by forty-three states, the territories of the United States and several foreign countries. It now has thirty-two members.

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Medical Director

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Red Cross Plans Enrollment Of Volunteer Blood Donors

The American Red Cross, acting at the request of the Surgeon General of the U. S. Army, has announced experimental plans for the promotion of a nationwide corps of volunteer blood donors which would become part of the national defense program, when and if needed.

Chairman Norman H. Davis, in announcing the proposed program, declared the plan would be to make available blood plasma to the U. S. Army Medical Corps in the event of emergency. For the past four years, he said, twelve Red Cross chapters have been furnishing whole blood from volunteers to hospitals for civilian use. The new program will be patterned along similar lines, using plasma instead of whole blood, it was explained.

The American Red Cross also has under consideration a parallel project to furnish voluntary plasma requested by the British Red Cross for the treatment of war victims, Chairman Davis said.

Details of this project are being studied, Mr. Davis said. Two possible plans are being explored. Under the first the American Red Cross would gather voluntary plasma in the United States and fly it to Europe for transfusion purposes. Under the second plan, which Mr. Davis indicated seemed to be more feasible, the American Red Cross would send equipment and technicians to England to gather the plasma on the spot.

For the domestic program, a preliminary study involving 1,300 Red Cross volunteers in four cities throughout the country will be conducted under the direction of a special committee appointed by the National Research Council, Chairman Davis said.

Dr. William DeKleine, national medical adviser of the Red Cross, said that the proposed plan for collecting blood was patterned after the blood bank idea except that plasma will be used instead of whole blood. "Plasma," he pointed out, "has many advantages over whole blood. The latter can be kept only a few days because the red blood cells deteriorate very quickly. Plasma can be kept indefinitely, does not require typing, and can be moved about freely without any damage to it. It can be transported any distance and is therefore applicable in military as well as civilian practice.

"Preliminary studies must be made to perfect methods of collecting, storing and administering plasma under conditions comparable to war-time emergency. Blood for this initial study will be furnished by volunteers at the various hospitals where members of the Research Committee are regularly employed. The plasma collected will be stored and used as emergencies arise at these hospitals."

After these preliminary investigations have been completed, the Red Cross will then work out with the medical department of the Army plans for enrolling prospective donors in cities throughout the country where collecting centers will be established. In the event of an emergency, the Red Cross could start delivering plasma within ten days after enrollment is completed. Dr. DeKleine said. Blood so collected will be pooled in large sterile containers, to simplify storage, in sufficient quantities to meet the emergency needs for treating the wounded.

Recruiting donors will be conducted by a special chapter blood transfusion committee which will include leading local physicians. The technical phases of the project will be performed by the medical staff of the cooperating hospitals. They will examine the prospective volunteers, make the necessary blood tests as well as doing the actual transfusions.

This blood transfusion project will be another step taken by the Red Cross in its preparedness program for national emergencies. It will function in close cooperation with the medical departments of the military forces, Dr. DeKleine said.

Dates Set For Obstetrics and Gynecology Examinations

The annual written examination and review of case histories (Part I) for Group B candidates of the American Board of Obstetrics and Gynecology will be held in various cities of the United States and Canada on Saturday, January 4, 1941, at 2:00 p.m. Candidates who successfully complete the Part I examinations proceed automatically to the Part II examinations held later in the year.

The following action regarding case records to be submitted by candidates taking the Group B, Part I, examination was passed by the Board at its annual meeting in Atlantic City, N. J., on June 6, 1940: "Case records submitted by candidates must be of patients treated within four years prior to the date of the candidate's application. The number of cases taken from one's residency service should not be more than half (25) of the total number of fifty (50) cases required."

Applications for admission to Group B, Part I, examinations must be on file in the Secretary's office not later than October 5, 1940.

The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting at Cleveland, Ohio, immediately prior to the June, 1941, meeting of the American Medical Association.

After January 1, 1942, there will be only one classification of candidates, and all will be required to take the Part I and Part II examinations.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

In response to numerous inquiries regarding special training requirements, the Board desires again to announce that there are three methods of meeting these requirements for admission to the Board examinations. First, by the residency system; second, by the partial residency and partial assistantship method; and third, entirely by the assistantship or "preceptorship method."

The Board will accept in lieu of the formal residency service the training acquired by a candidate serving on an assistant or dispensary staff of an obstetrical and gynecological division of a recognized obstetrical-gynecologist (preferably a Diplomate). The time required for this type of training must be longer than with the formal, more intensive residency type of training, and the allowance of time depends upon the duties and responsibility given the candidate. Applicants lacking all formal special training should have a minimum of five years of hospital clinic, or assistant staff appointments in the specialty, under approved direction. Teaching appointments without accompanying hospital staff or clinical appointments will not satisfy the Board requirements. A special form amplifying the original application must be filled out to cover the details of such assistantship, or preceptorship type, of training. The Board approves for special training, work done in institutions approved jointly by the Board and by the Council on Medical Education and Hospitals of the A. M. A.

Cerevim Corporation Introduces New Product

A new product, "Betamin" (Thiamin Wafers), has been introduced by the Cerevim Products Corporation, 100 Sixth Avenue, New York, N. Y. According to the corporation, each wafer contains 100 International Units (.3mg.) of Vitamin B1 and is low in caloric value (15 calories per wafer). The wafers are issued in hermetically sealed tins (approximately a thirty-day prescription) and available at leading pharmacies. The product has been accepted by the Council on Foods of the American Medical Association. The corporation invites physicians to mail their prescription blanks for professional samples and literature.

Cancer Data Released by Bureau of the Census

Interesting data on cancer mortality in the United States for the years 1934-38 recently has been released by the Bureau of the Census and published in the National Bulletin of the American Society for the Control of Cancer.

A total of 149,214 deaths from cancer was recorded in this country in 1938, of which 69,857, or 47 per cent, occurred in males, and 79,357, or 53 per cent, in females (the respective distribution of the population by sex in 1930 being 50.6 and 49.4).

The recorded mortality from cancer and other malignant tumors of all sites, which has been shown to have increased in the registration States of 1900 from 68.3 in 1900 to 120.6 in 1935, even with the changing age composition of the population taken into account, has shown a further continuous increase during the period 1934-38. During the four-year interval, the increase in recorded mortality from cancer amounted to 10.5 per cent, as compared with an estimated increase of 2.8 per cent in the population. An increase of 13 per cent is shown for males as compared with 9 per cent for females.

The largest percentage increase was recorded for cancer of the respiratory system (52 per cent for males and 39 per cent for females), while the only broad classification groups showing a decrease were cancer of the buccal cavity and pharynx (for both sexes) and cancer of the skin (for males only).

Cancer of the digestive tract and peritoneum was the most important group from the standpoint of number of deaths, causing 47 per cent of the total cancer mortality in 1938. The number of deaths from cancer of the various sites grouped in this classification increased 9.3 per cent for males and 6.8 per cent for females during the four-year period. Deaths from cancer of the genitourinary organs (uterus excluded) increased by about 20 per cent for both sexes. In females, cancer of the uterus (which caused 20 per cent of all cancer mortality in that sex in 1938) increased 4 per cent, while cancer of the breast, also a numerically important cause of cancer mortality in women, increased 10 per cent during the four years.

Sharp Increase in Poliomyelitis in 1939

A sharp increase in the number of cases of poliomyelitis was reported in 1939 over the total recorded in 1938, according to figures released by the U. S. Public Health Service. There were 7,272 cases in 1939 as compared with 1,705 cases in 1938. The latter was considered a year of unusually low incidence.

In 1939 the distribution of the disease was characterized by a number of localized outbreaks in various sections of the country in addition to a fairly widespread occurrence in the mountain states. The case rate was highest in New Mexico, South Carolina, Arizona and Minnesota, followed by Michigan, Utah and California. The most extensive area included a group of counties in Arizona, Utah, New Mexico, Colorado and northwestern Texas.

NEW COMBINED METHOD EXPOUNDED FOR TREATING DIPHTHERIA OR TETANUS

A method for effectively treating persons who have been exposed to diphtheria or tetanus before they become ill with either disease has now had its efficacy thoroughly established, Gaston Ramon, M.D., Garches, France, reports in *The Journal of the American Medical Association.*

The method involves the administration of antitoxin, which in itself combats the disease, followed by injections of toxoid which stimulate the body in developing its own defense mechanism. Heretofore it has been impossible to stimulate the individual's own immunity in such a short time.

The doctor points out that this method for tetanus has great importance because of the present European conflict.

The method not only provides an effective means of combating the disease but also produces lasting immunity with speed and safety.

"Tests made on soldiers showed that an active antitetanic administration could be realized by simultaneous injections of antitetanic serum and toxoid." Dr. Ramon says, "followed by one or several doses of toxoid at more or less long intervals.

"Animal studies and numerous investigations in human medicine," he points out, "have given proof that combined immunization when correctly applied by one injection of antitoxic serum and repeated injections of specific toxoid is able to superimpose uninterruptedly active immunity on passive immunity, thus insuring a permanent antitoxic immunity against tetanus or diphteria. Such immunization is the best preventive measure again tetanus for the nonvaccinated wounded patient and against diphtheria for the nonvaccinated child who runs a special risk of infection. It gives a better chance of success in the treatment of tetanus and diphtheria."

Collection on Gastronomy Given Library

A collection of books on gastronomy has been given to the Library of Congress, Washington, D. C., by Dr. Arvill W. Bitting, food technologist of San Francisco, in memory of his wife, Katherine Golden Bitting, who died in 1937. The collection was assembled during their lifelong investigations into the chemistry, bacteriology and history of foods.

The Library of Congress has agreed, as an exception to its usual procedure, to establish the Katherine Golden Bitting Collection on Gastronomy as a separate unit among its collections, where it may be readily available, in conjunction with her bibliography, to present and future students in the field to which she so fruitfully dedicated her life, according to an announcement.

Mrs. Bitting graduated at Purdue University, remaining there as an instructor and assistant professor in botany and biology; in 1904 she married Dr. Bitting, her lifelong collaborator in her work on foodstuffs, also at that time a member of the Purdue faculty. In 1907 both joined the staff of the bureau of chemistry of the U. S. Department of Agriculture.

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Eye Physician Gives Advice on Selections of Sun Glasses

Sun glasses should be worn only when you are in the bright sun and should not be used for night driving, says Dr. Arno E. Town of New York City, in the current issue of The Sight Saving Review, quarterly journal of the National Society for the Prevention of Blindness. Dr. Town is a member of the Society's Medical Committee.

"In a survey which I have made of a representative group of ophthalmologists throughout the country," Dr. Town remarked, "the results show unanimous agreement that sun glasses should be worn only in the bright sun. Fifty per cent are of the opinion that they may be harmful if used otherwise. Furthermore, all the eye physicians agree that only ground and polished glasses should be worn.

"There are so many different types of sun glasses sold under so many different names, many of which are very similar and produce the same effect, that it is easily understood why the public may be in a dilemma. First of all, the material in this article is confined to sun glasses and does not include protective glasses required in industries nor the tinted glasses which are prescribed as a part of the treatment of eye diseases.

"Last summer, a fad of wearing colored glasses was created by movie stars and other prominent persons who got behind the smoked goggles at first to hide, and then continued to wear them because of the air of mysterious glamor they afforded. The more hideous and streamlined were the blinders, the smarter they were considered, and many girls had differently colored ones to match their wardrobes.

"Inferior quality sun glasses, made from celluloid, poor blown or pressed glass, will add irregular astigmatism, myopia, hyperopia, or prismatic imbalance to the refractive mechanism. Consequently, they only increase the strain produced by the glare. The best advice to give on this score is: Buy your sun glasses from a reputable optician and insist upon good quality ground and polished protection lenses, and, if necessary, ground with your correct distance prescription.

"Some advice which may save you trouble is that sun glasses are designed for day wear and should not be worn for night driving as they lower the visibility too much. As yet, no glass has been made which will overcome the glare of auto headlight and still be safe.

"Many people, in long distance auto driving, suffer headaches and eye strain which they believe can be corrected by sun glasses; but some people who are sensitive to light have a refractive error or some other sources of eyestrain. Hence, in many cases, glasses skillfully correcting the refractive error relieve most of the cause of subnormal light tolerance, which is the complaint of the majority of persons wearing tinted lenses.

"We have heard considerable criticism of sun glasses to the effect that they become habit-forming. Just what is meant by habit-forming is not clear. Certainly they will not cause an atrophy of the color sense. However, if worn unnecessarily and continuously they may lower one's tolerance to light and instigate a discomfort in moderate illumination.

"In choosing a sun glass, remember that all good quality absorptive and sun lenses on the market are of value and will serve your purpose as a glass for beach, snow, and bright summer day wear. When you are buying a pair of sun glasses, step outside on the sidewalk and try them on to see if they will suit your purpose.

Assistant Surgeon General Appointed

Brig. Gen. Shelley U. Marietta, Medical Corp, U. S. Army, has been appointed assistant to the Surgeon General of the Army. General Marietta was graduated from the University of Illinois School of Medicine, Chicago, in 1909 and from the Army Medical School in 1912. He has served at various stations in the United States, in the Philippine Islands, in France and in Hawaii.

Black Widow Spider Antivenin Available

Now that summer weather is with us again, there is one summer visitor which will turn up somewhere, sometime, and let her unwelcome presence be known—the black widow spider.

This dangerous member of the spider family with the bright red hour-glass marking on her abdomen is distributed over most of the United States. Many bites occur every year with several deaths resulting.

Last year, the Mulford Biological Laboratories of Sharp & Dohme introduced a black widow spider antivenin which is indicated in the specific treatment of the effect of the venom from bites of this spider. It is supplied in lyophilized form so that its potency is assured for five years. With this specific antivenin now available for distribution throughout the country it will prove a helpful aid in preventing the serious toxic effects and possible deaths which follow the bites of the black widow.

Placement Bureau for Radiologists Established

The American Registry of X-Ray Technicians announces the establishment of a placement bureau. The services of the bureau will be limited to physician-radiologists of approved standing and x-ray technicians who have been certified by the registry. It will operate without fees.

Applicants for positions will be classified according to their added abilities as nurses, laboratory technicians or other qualifications. Physician-radiologists wishing to register a vacancy for an x-ray technician with the placement bureau may do so by writing to Alfred B. Green, R. T., executive secretary, American Registry of X-Ray Technicians, Oak Terrace, Minn.

Thoracic Surgery Prize Awarded

The American Association for Thoracic Surgery awarded the first Rose Lampert Graff prize of $250 to Dr. Paul W. Gebauer, Cleveland, at its meeting in Cleveland in June for a paper on cancer of the lungs. Dr. Gebauer graduated from Western Reserve University School of Medicine, Cleveland, in 1933. The prize was given by the Rose Lampert Graff Foundation of Los Angeles, established in 1939 by Mr. and Mrs. Ellis Levy in memory of Mrs. Levy's mother. Dr. Jacob J. Singer, Los Angeles, is director of the fund. The foundation offers a similar prize through the American Association for Thoracic Surgery for 1941. Any one who wishes to submit a paper should send it to Dr. Richard H. Meade, Jr., secretary, 2116 Pine Street, Philadelphia.

Injections Aid Muscular Weakness

Improvement or recovery of six patients from muscular weakness and incoordination occurred after injections of vitamin B6, William Antopol, M.D., and Clement E. Schotland, M.D., Newark, N. J., report in *The Journal of the American Medical Association.*

The condition of the patients before treatment with vitamin B6 was characterized by a waddling gait, difficulty in rising from the sitting and reclining positions, fatigue on walking and general bodily muscle weakness. In addition to the foregoing symptoms some of the patients also had a forward curvature of the spine.

All or some of these symptoms were no longer complained of after treatment. Improvement was stationary in five patients; relapse, with a continued downward course, occurred in one patient.

The technical term for the disorder of these patients is pseudohypertrophic muscular dystrophy.

"In view of the promising results, though the patients have not been cured and are still under treatment," Drs. Antopol and Schotland say, "this form of therapy is being studied further and is also being investigated in conjunction with other vitamins, particularly E and riboflavin (a constituent of the vitamin B complex), and with the drugs, aminoacetic acid and ephedrine."

Federal Law Applies To Cosmetic Claims

"Nourishing cream," "deep pore cleanser," "skin food," "hair color restorer" and "nonallergic" products are some of the cosmetics which the American woman (and, incidently, the manufacturer of cosmetics) may have to give up, due to the passing of the Wheeler-Lea Act and the new Food, Drug and Cosmetic Act in 1938, according to the editor's note in an introduction to an article by Howard Fox, M. D., New York, in the April issue of *Hygeia, The Health Magazine.*

Although actual damage to the skin from cosmetics is relatively uncommon, manufacturers still make many ridiculous claims and misleading statements regarding the skin and its susceptibility to cosmetics. Improper brand names are one example. In addition to the aforementioned, the introduction cites the following examples of misleading labels: "rejuvenating cream," "scalp food," "circulating cream," "muscle oil," "stimulating cream" and cosmetics represented as valuable because of their vitamin content.

In his discussion of unwarranted statements by advertisers of cosmetics, Dr. Fox points out that references to the skin as an organ of "exquisite delicacy" have helped to promote the idea that in order to maintain a "tender skin," which has come to be considered a mark of aristocracy, one should not wash the face with soap and water. Actually, he says, "the skin is a waterproof covering which is extremely tough and resistant and able to withstand an incredible amount of abuse and injury."

"The statement that cosmetic preparations preserve the skin is frequently made and in my opinion is untrue. If it is true, as it has often been said, that men (who use no cosmetics) have as good a complexion as women (who do), then the argument that cosmetics preserve the skin is completely shattered.

"A perfect example of cosmetic fallacy is furnished by the words 'nourishing cream'. Needless to say, no such thing exists. Your skin is nourished in exactly the same manner as your muscles, bones, internal organs and other parts of your body—solely by the food that is taken into your stomach.

"The word 'pores' has proved to be a gold mine to the cosmetic industry. Cosmetic advertising says that all you need to close the pores of a coarse skin is an application of the magic astringent. This, of course, is not true, as they cannot be closed by any method of treatment."

Regarding so-called "muscle oils" and "wrinkle removers," Dr. Fox declares that "no preparation applied to the skin has any effect on the muscles of the skin. Nor will any cream do away with wrinkles, which are due to disappearance of the natural fat under the skin and a lessening of the tension of the skin.

"Such terms as 'tinting' the hair, which of course means dyeing, or 'restoring' the color of the hair are substituted for 'dyeing' in advertising copy. Hair preparations which change the color of the hair either dye or bleach it. Both of these products are harmless in the majority of cases. Mention should be made, however, of one of the most dangerous drugs to use for the hair, namely paraphenylendiamine. This was the main constituent of a certain dye for the eyelashes which caused a number of cases of blindness and one death.

"Freckle removers constitute another type of cosmetic preparation that is essentially fraudulent. Temporary freckles disappear largely after summer; permanent freckles cannot be safely removed by lotions or creams.

"Some persons have a notion that a transparent soap must be unusually pure. This is not always true, as such soaps require special handling in their manufacture and may be less reliable than those which are opaque.

"The buyer should beware of freak soaps and those for which extravagent claims are made. Medicated soaps have only limited value at best, in the opinion of the medical profession."

Drugs Valuable in Hypertension Treatment

Although there is no medicinal cure for hypertension (high blood pressure), the medical treatment has resolved itself into the establishment of the most perfect possible physical and mental control of the patient, and in this treatment scheme drugs are important for the achievement of the best results, Herman O. Mosenthal, M.D., New York, declares in *The Journal of the American Medical Association.* His article is one of the series written by eminent authorities on the uses of official and other medicines, developed through the cooperation of the U. S. Pharmacopeial Committee of Revision and *The Journal,*

Dr. Mosenthal points out that there are three elements involved in treating hypertension: medicinal, hygienic and surgical. His paper concerns only the medicinal treatment.

Because the mechanism involved in high blood pressure or hypertension is not fully understood, present methods of treatment are concerned with the relief of symptoms. Thus the main objectives are to avoid nerve tension and strain during the day and make certain of satisfactory sleep at night. Sufficient rest, relief from excessive responsibilities and pleasant recreation are recommended. Dr. Mosenthal also suggests two hours' rest after lunch without interruption, eight hours in bed at night, and participation in the usual activities during the rest of the day, avoiding any exertion that might cause shortness of breath. A productive, sedentary routine occupation as a rule is more desirable than permanent retirement.

It is also important to maintain the blood pressure at a level sufficiently low to avoid the secondary changes that are often the cause of death when the pressure is persistently elevated. Disorders of the heart or brain are the most important of these changes.

"The generally accepted explanation for an elevation of the blood pressure is an increase in the resistance to the arterial flow caused by a constriction of the small arterial branches at the distal (remote) part of the circulation," Dr. Mosenthal explains. "Whether this is the reason for the hypertension or is a secondary, compensatory effect to hypertension, resulting from disturbed activity of the heart and muscles of the larger arteries, will make an enormous difference in the reasoning that governs the application of drugs." Present conceptions, he points out, can serve as working hypotheses but nothing more than that.

Some types of drugs act by directly dilating and thus relaxing the arterial branches. Among these are the nitrites, including amyl nitrite, glyceryl trinitrate, sodium nitrite, etc. Others, however, such as the bromides, barbiturates and chloral hydrate, affect the arterial branches indirectly by depressing the central nervous system. In a third class are the thiocyanates and iodides, which have been helpful in relieving the symptoms of hypertension although their mode of action is largely unknown.

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Respiratory Infection—Rheumatic Fever

Careful investigation for infections of the upper respiratory tract should be a routine measure in the prevention of recurrences of rheumatic fever, Russell L. Cecil, M. D., New York, declares in *The Journal of the American Medical Association.* His article on the treatment of this disease is one of a series of papers, developed through the cooperation of the U. S. Pharmacopeial Committee of Revision and *The Journal,* concerning the uses of official and other medicines.

Discussing the close association of rheumatic fever with infections of the upper respiratory tract, Dr. Cecil states: "In more than 50 per cent of cases the onset of rheumatic fever is preceded by tousillitis or a sore throat. In others, there is a preceding history of sinus infection, middle ear infection, bronchitis or pneumonia.

"Tousils showing any evidence of disease should be removed promptly. The sinuses and teeth should also be investigated for possible infection. Children with a tendency to rheumatism should be carefully protected agaiust exposure to cold and dampness. Sleeping in wet clothing or getting chilled when fatigued predisposes to respiratory infection with possible rheumatic cousequenses."

Recent studies indicate that the use of sulfanilamide offers real promise as a practical measure for preventing recurrent attacks of the disease, Dr. Cecil says.

A warm climate is a valuable aid in preventing recurrences. For childreu who cannot have this advantage, prophylactic inoculations with streptococcus vaccines are worth trying. Good personal hygieuc is of great importance.

Dr. Cecil points out that rheumatic fever may affect either the joints or the heart. In adults, joint symptoms predominate, while in children, those referable to the heart are the more conspicuous. Once a child has rheumatic fever, there is always danger of damage to the heart. However, in many cases the amount of damage inflicted by the first attack is minimal and can be completely outgrown if the after-care of the patient is properly controlled.

Although rheumatic fever is still classified as a disease of unknown origin, Dr. Cecil says, authorities are pretty well agreed that it is infectious, aud many students are convinced that it is closely associated with streptococcic infection. Whether the various inflammatory lesions are the actual sites of infection or whether they are the expression of some toxic reaction is still a matter for investigation.

While many efforts have beeu made to develop a specific treatment for rheumatic fever, noue of those yet offered has given definitely satisfactory results. At present complete rest is the keynote of treatment for rheumatic fever affecting the joints. Local applications are often useful in relieving the pain. Although physical therapy does not play an important role in the treatment of the acute phases, treatment by heat, water or iufra-red or ultraviolet rays may be used in cases in which the joint symptoms become chronic. Massage, passive movements and fever treatment may be of value in the chronic form.

Many drugs have been found valuable in rheumatic fever, especially the various compounds of salicylic acid. The after-care is of the greatest importauce in view of the grave dauger of relapses and further recurrences of the disease.

Facial Neuralgia Relieved By Vitamin B1

Fifty-two patieuts out of fifty-eight obtained relief from twitching facial neuralgia, known as tic douloureux, by treatment with vitamin B1, Henry Borsook, Ph.D., M. Y. Kremers, M.D., and C. G. Wiggins, D.D.S., Pasadena, Calif., declare in a recent issue of *The Journal of the American Medical Association.*

The authors point out that their study was prompted by a desire to find some alternative to the most effective treatment yet available for tic douloureux, partial or total severance of the sensory route of the involved nerve. They say that: "Adequate surgical treatment is not available to many sufferers with this disease; in some the pain, though extremely troublesome, is hardly so severe as to persuade the patient to submit to the necessary operation.

"Present palliative treatments of trigeminal neuralgia are, on the whole, unsatisfactory. Inhalation of trichloroethylene, which relieves some sufferers at first, frequently becomes totally ineffective later. The other commonly used palliative treatment, alcohol injection of the trunk of the nerve(often affords relief repeatedly for periods varying from months to years. Yet many patients have reported to us their failure to obtain relief from alcohol injection. Whether this was the fault of the operators or of some peculiarity of their condition we were uuable to determine.

"The advantages of the treatment which we have evolved are that it is available everywhere or can be easily made so, and that it can be administered by any practitioner aud, with some instruction, even by the patieut himself."

Together with the vitamin by vein the patients were put on diets high in vitamin and low in carbohydrate. The patieuts not relieved by this combination treatment were given injections of concentrated liver extracts. Another supplement to the treatment of all the patients was 1 ounce of concentrated rice polishings. This supplied daily 1,500 units of vitamiu B1.

Discussing the length of time necessary for improvement to occur with this type of treatment, the California workers say: "There is great variation in the speed at which differeut patieuts respond to treatment. Taking all the subjects together the time varied from one to six months. We have not as yet found anything in the symptoms or cliuical history from which we can predict the course of recovery of any patient. Age, sex, severity or duration of symptoms and clinical history afford no criterion.

"The present indications," the authors continue, "are that in a minority of cases significant improvement is not obtained without liver treatment but that by this additional treatment the period in which the vitamin B1 treatment is required is not shortened.

"Two features have characterized the course of recovery in nearly every case," they explain. "The first is that, after the sharp stabbing or buruing pain has stopped, the patients report a persistent soreness over a fairly wide area which includes the 'trigger point' (a point of irritation causing pain in another area). Unlike the paroxysms of sharp pain, the soreness is felt most of the day. Gradually the area of soreness is reduced; the areas from which it disappears last are the trigger points. At the same time the soreness becomes less severe, is experienced for a shorter time each day and finally disappears entirely.

"A second common feature in the course of recovery is that relapses occur. These become progressively less severe and of shorter duration."

The authors state that at least another year of observation will have to elapse before a satisfactory answer can be given as to how permanent the relief will be. At present they believe that "those who respond quickly (withiu one month) may be maintained free from pain by taking daily the 1 ounce of the concentrated rice polishings we have been using. Our present limited experience indicates that those who respond slowly will continue to need injections of vitamin B1 indefinitely. The price of vitamin B1 is continually declining, so that this need not be prohibitively costly."

Potassium Salt and Hay Fever

Potassium salts have no practical value in the treatment of hay fever and seasonal asthma, Simon S. Rubin, M.D., Abe L. Aaronson, M.D., Morris A. Kaplan, M.D., and Samuel M. Feinberg, M.D., Chicago, report in *The Journal of the American Medical Association.* Their conclusions are based on studies of results of such treatment in 153 victims of hay fever and asthma. The symptoms of a few of their patients, the authors state, were made worse by the salts.

ABSTRACTS : REVIEWS : COMMENTS and CORRESPONDENCE

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments From
LeRoy Long Clinic
714 Medical Arts Building, Oklahoma City

"The Anaerobic Streptococci In Tubo-Ovarian Abscess." By W. A. Altenmeier, M.S., M.D. Detroit, Michigan. American Journal of Obstetrics and Gynecology. June 1940, Vol. 39, No. 6, Page 1038.

"The chronicity of tubo-ovarian abscesses is an old problem. In the twenty five consecutive cases of this study, positive bacterial cultures were obtained from the pns in twenty-three, contrary to the usually accepted idea that such pus is sterile. The anaerobic streptococcus was by far the most frequently encountered organism, being fonnd in pnre or mixed culture in twenty-two of the twenty-three positive cultures."

Negative cultures were fonnd in only two of the twenty-five cases.

The anthor stresses the value of routine anaerobic as well as aerobic cnltures in tnbo-ovarian abscess and also the importance of immediate cultivation and long incubation.

He discnsses the pathogenicity of these anaerobic streptococci for man and feels that, though it has not been proved, it is suggestive that they do have a pathogenicity.

"The presence of micro-organisms growing in the pus of chronic tubo-ovarian abscess would seem to explain the characteristic recurrent attacks better than the assumption that the abscess becomes repeatedly reinfected from without."

Comment: This is a most interesting study largely because the generally accepted idea that the pns in tubo-ovarian abscess is sterile has materially influenced the type of treatment that these individnals receive.

As this author points out there have been numerous investigations to prove that anaerobic streptococci have a pathogenicity in the human being in such diseases as puerperal sepsis, peritonitis, and other snppurative lesions.

It will be most interesting to have a similar group of cases studied after they have received preoperative treatment with snlfanilamide or sufapyridine.

Wendell Long.

"Ovarian Autografting For Endometriosis." By Virgil S. Counseller, M.D., F.A.C.S., and Donald H. Wrork, M.D. Rochester, Minnesota. Surgery Gynecology and Obstetrics. February 1, 1940, Volume 7, Number 2, Page 220.

When there is extensive endometriosis, the surgeon is faced with the alternative of removing both ovaries or sufficient X-ray therapy to permanently suppress ovarian function. In either event, a snrgical menopause promptly ensnes and there is a high percentage of distressing symptoms.

These authors have reviewed the results of autografting of ovarian tissue and since 1936 have operated upon fifteen patients by the method of multiple implantation. In this scheme, multiple small pieces of undiseased ovary are implanted in the abdominal wall near the line of incision, usually exterior to the fascia of the rectns mnscle.

They report that no case of endometriosis of the site of the graft has been enconntered thus far and likewise that there has been no extension of the endometrial tissue in the pelvis.

"For three patients for whom treatment was successfnl, the amount of prolan and estrin excreted in the urine returned to normal values coincident with the enlargement of the nodes. Althongh some of the antografts may be insnfficient to maintain normal valnes for estrin and prolan, they are sufficient to hold the symptoms of the menopause in abeyance, to prevent atrophy of the genitalia, to maintain certain feminine attributes, and to allow a milder, more natural type of menopause instead of an abrupt, severe, artificial menopause."

In only one of their small gronp of patients has it been necessary to remove the implanted ovarian tissne because of enlargement and painfnl cystic formation.

Comment: One of the most distressing featnres of the proper care of patients with extensive endometriosis is the fact that freqnently the ovaries have to be removed in order to obtain symptomatic relief from the disease and yet by so doing a surgical menopause is induced.

This report of Counseller's is most encouraging and, in light of the desirability of avoiding menopausual symptoms and at the same time irradicating the pathological changes in the pelvis, it would certainly seem justifiable to employ the mnltiple ovarian autotransplantation in selected individuals where there was still undiseased ovarian tissne which could be employed for this purpose. This is particnlarly true since Connseller reports that there has been no change or extension in the endometriosis process in the pelvis and no endometriosis in the site of transplantation. While his is a very small series of patients, it mnst be considered as an important contribntion.

Wendell Long.

"The Intravenous Use of Serum and Plasma, Fresh and Preserved." By Max M. Strumia, M.D., Joseph A. Wagner, M.D., and J. Frederick Monaghan, M.D. Bryn Mawr, Pa. Annals of Surgery, April, 1940, Vol. III, No. 4, Page 623.

In recent years the authors have made intensive study of the intravenous use of blood plasma in place of whole blood. Both serum and plasma have been used in infections, in the prophylaxis and treatment of nutritional hypoproteinemia and anemia in bnrns, in certain hemorrhagic and hemolytic diseases, in pre-eclamptic states, in liver disease, in chronic colitis, and finally in secondary shock.

The authors have not found it necessary to type citrated plasma prior to intravenous administration. As a rule the plasma is diluted with equal parts of saline or saline-glncose solntion before injection, but it may be given undilnted. Plasma has proved its complete safety and absence from reactions in over 1,500 administrations. One important featnre is that it can be given in large and repeated doses.

Citrated plasma, separated in the manner mentioned in the article, and lyophiled by the method of Flosdorf and Mudd has been regenerated with sterile water to restore its original volume and given intravenously to patients in quantities up to 100 cc. without reactions. It has even been given in five times concentrated solution at the rate of 110 cc. in six minntes without reaction. The method of choice for injections is the drip method, at a rate of abont fonr to five cc. per minute.

It is nnfortunate that in many reports, the terms serum and plasma appear to be used interchangeably. In this paper, the term serum means the fluid portion of the blood separated after clotting. Plasma is the fluid

recovered after centrifuging citrated blood. The intravenous use of serum, fresh or preserved by the lyophile process, is often followed by severe reactions. Such reactions have not been encountered when citrated plasma is employed, fresh or preserved. It is assumed that the difference is brought about by the process of fibrin percipitatiou.

Conclusion: "The iutravenous use of citrated blood plasma without cross-matching is both safe and convenient. This applies to fresh plasma, or plasma preserved by either refrigeration at four degrees C. or the lyophile process. Serum, separted after clotting, may cause reactious, often severe, when intravenously injected, whether employed fresh or preserved by either refrigeration or the lyophile process."

Comment: Iuasmuch as there are frequent circumstances under which serum or plasma is needed without blood cells, we feel that this is an important therapeutic contribution. In hospitals where blood banks are available, blood plasma cau be obtained without a great deal of trouble. Within the past few weeks blood serum and plasma has been placed on the market commercially so that it may be used by the private practitioner very easily.

Warren Poole.

"Use of Whole Blood as a Means of Preventing Peritonitis and Adhesions." By Edward G. Joseph, M.S., M.D., M.R.C.S., Jerusalem, Palestine. Annals of Surgery, April 1940, Vol. III, No. 4, Page 618.

While caring for the victims of the riots of Jerusalem iu 1936, the author observed that a surprising number of patients recovered who had had bowel injuries with fecal material free in the peritoneal cavity. The question arose in his mind as to the reason for these patients, who were operated upon under unfavorable emergency circumstauces, to recover, whereas carefully conducted resections of the large bowel, in spite of utmost precaution, often end with fatal peritonitis. The essential difference between the two procedures is that the systematic resection of the bowel is conducted in a perfectly dry field, while the emergency operations were often undertaken in a field swimming with blood.

Experiments upon animals were carried out in au effort to learn whether the presence of the blood had had a beneficial effect and might have prevented the occurreuce of peritonitis. The experiments were divided into three categories:

Group I: Abdomen opeued, feces inserted, and wound closed. Twelve animals with one death.

Group II: Abdomen opeued, feces inserted, sigmoid colon incised transversely and imuediately closed. Twelve animals. All developed peritonitis.

Group III: Same as Group II plus the addition of fresh blood to the peritoneal cavity. Eight animals with two dying of wound infection. Several dogs of this group were later killed and the peritoneal cavity found to be absolutely free of any sign of adhesions.

The great difference in the percentage of mortality betweeu Group I and Group II proves that contamination of the peritoneal cavity with feces is not in itself sufficient to produce fatal outcome.

The difference between Group II and Group III would serve to indicate that free blood in the peritoneal cavity increases the resistance of the peritoneum by about 75 per cent.

The author has applied this method of treatment in a small series of cases of peritonitis in human beings with very favorable results.

Comment: The author retells facts concerning the spectacular results we have all seeu at one time or another after gunshot wouuds have been repaired hurriedly. Whether or not we go so far as to inject blood iuto the peritoneal cavity, we might well be less careful in removing all the blood from the peritoneal cavity in our future operation.

Warren Poole.

"Ammonium Bicarbonate Secreted By Surgical Maggots Stimulates Healing In Purulent Wounds." By William Robinson, Senior Entomologist, United States Department of Agriculture, Washington, D. C., The American Journal of Surgery, New Series, January 1940, Volume XLVII, No. 1, Page III.

Referring to the resurrection and employment of the blowfly maggot treatmeut of chronic non-healing wounds popularized by Baer some years ago, the author has collected evidence which shows that the success of the so-called "maggot treatment" is "not due entirely to the scavenger action of the maggots in cleansing the wound." Baer, himself, is quoted as having "conceived the idea that in addition 'some biochemical exchange takes place between the maggot and the tissues of the patieut.'" The author reports that later, in the Bureau of Entomology and Plant Quarantine, it was found that allautoin, a metabolic product present in the maggot secretions, stimulates the healing effects similar to those produced by the maggots, and it was demonstrated in the Bureau that urea possesses the same characteristics.

Additional investigations have not confirmed that allantoin and urea are altogether responsible for the success of the "maggot treatment." Neither one exists in sufficient quantity to justify the first couclusions.

It was finally demonstrated that in the so-called maggot treatment there was an abundant and reactive excretion of ammonia occurring first in the excretions as ammonium carbonate "which is unstable, and later as ammonium bicarbonate." "Maggots secrete comparatively large quantities of ammonium bicarbonate, along with other residue, directly into the wound, and this occurs without evidence of injury."

In 1937 there was a series of experiments in animals, chiefly dogs aud rabbits, in which there were persistent discharging sores, chiefly on the back and legs. The treatment consisted of applications several times daily of 2 per cent solutions of ammonium carbonate or bicarbonate in sterile water. "The animals showed no discomfort and within two or three days the cleansing and healing effects formerly noted with allantoin and urea began to appear. No differenees could be noted between the carbonate and the bicarbonate tests. The wounds, which had remained open and running before treatment, healed with the formation of very little scar tissue and in some cases with a return of hair to the surface. The writer tried the bicarbonate later in the treatment of some miuor injuries in his own case and also in some of his associates. When first applied it produced a slight stinging sensation which soon disappeared. In subsequent applications this smarting became less noticeable, and healing appeared to be normal."

The uext year the Bureau supplied concentrated sterile solutions to a number of physicians and surgeons. The solutions were diluted so that they would represent 1 per cent or 2 per cent of ammonium bicarbonate. In this strength—that is 1 per cent or 2 per cent solution —they were employed iu various types of unhealed wounds. They were applied as 1 per cent or 2 per cent concentrations on gauze packs saturated with the material and in some cases they were irrigated into the wounds.

"The fact became evident as the treatments progressed that these two ammonium compounds are each able to promote healing in purulent and indolent wounds. No unfavorable effects were observed beyond some preliminary smarting in some cases."

"With this as a basis, treatments were then applied to a larger number of cases, including such purulent conditions as chronic osteomyelitis, diabetic and varicose ulcers, slow-healing abdominal wounds, abscesses, otitis media and infected lacerations. Ammonium bicarbonate, being more stable and less alkaline, was used throughout later tests."

"An improvement in the condition of the wound similar to that produced by maggots usually began to take

place after a few day's application of the treatmeut. The offensive odor decreased rapidly and the wounds became cleaner. Small areas of fresh granulatious could be seen in the wounds and later a general development of this tissue usually occurred."

A number of case histories, covering various types of suppurative conditions of a chronic character, are included in this article, and, on the whole, it would appear that there is sound reason for regarding the local applications of ammonium bicarbonate, in the manner already indicated, should be regarded as a distinct and valuable adjuuct iu the treatment of purulent wounds.

It is stated by the author that ammonium bicarbouate is readily available commercially and is made on a large scale for various purposes. "It also has the advautage of being cheap and easily prepared for use. Oue-pound bottles cau be purchased for about forty cents. At that price a liter of 1 per cent solution costs one ceut. A stock solution is made by adding 10 grams of the bicarbonate to each liter of cold sterile water and stirring occasionally until dissolved. It goes iuto solution rapidly. If the containers are tightly corked, both the crystals aud the solution will keep well."

It is reported that a number of surgeons have cooperated with the Bureau iu the cliuical employment of ammonium bicarbonate in different types of supperative wounds. The average strength of the solution employed has been from one-half of one per cent to as high as four per cent concentratiou.

Iu a foot-note, the writer lists the names of different surgeons in various parts of the country who have cooperated in the clinical trial of ammonium bicarbonate iu suppurative wounds. Amoug them is Dr. H. D. Murdock, Tulsa, Oklahoma.

Comments: This report is based upon technical laboratory investigations aud clinical trial. The reasouing is sound, and the clinical reports are quite conviucing. In the judgment of this writer, it is a most important report, and iudicates that the employment of solutions of ammonium bicarbonate promises to be au important adjunct in connection with tedious chronic suppurative processes.

I thiuk that I should repeat that the applicatiou is made by placing gauze saturated with the solutiou over the suppurating area, aud, sometimes, the installatiou of the solution into sinuses, and similar placed chronic suppurative areas more or less remote from the surface.

LeRoy Loug, Sr.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
911 Medical Arts Building, Tulsa

"Glaucoma Errors That I Have Made and That I Have Seen." Harry G. Gradle, M.D. Chicago, Illinois. Southern Medical Journal, May, 1940.

This paper gives much that is of practical worth to the ophthalmologist. On checking iu the dispensary work at the Eye and Ear Infirmary it was found that only about three per ceut of the glaucoma cases were kept under observation. This error has been corrected by discussing fully with the patient the character of his disease, what may be expected if he is kept under observation, controlled with myotics, etc., or what might be expected iu the way of losing his vision if this was neglected. One is apt to do this with private patients but does not have or take time to do so with clinic patients. After this regime was inaugurated it was found that 96 per cent of these patients were returning regularly to the clinic for observation.

According to the author the difference in the classification of primary and secondary glaucoma is a matter of ignorance; we do not know the cause of primary glaucoma but do know the cause of secondary glaucoma. He thinks that the correct classification would be incompensated and compensated, or the absolute type. His idea is that glaucoma is not a disease but is a term that embraces a variety of diseases, that have different clinical manifestations, different etiologic factors and therefore require different treatment.

In a case of iucompeusated glaucoma, it is a matter of hours that count. Many factors enter iuto the decisiou of wheu the case becomes surgical but the author has set a more or less elastic rule which says that forty-eight to seventy-two hours is the maximum amount of time allowed for non-surgical treatment. Waste of time is the greatest mistake in acute incompeusated glaucoma.

The method and type of operation to be employed is discussed very freely. As a rule it is not in the acute glaucoma that so many mistakes are made for it is obvious that something must be done quickly or the coutinued hypertension will result in blindness. Iu the compensated glaucoma, however, the condition is sometimes overlooked, which is excusable in the uon-medical refractionist but uot for the medical ophthalmologist. Every patient beyond the age of 30 years should be regarded as a poteutial glaucoma and checked carefully accordingly. The ophthalmologist is supposed to be the last word in ophthalmology.

The author does not hesitate to use mydriatics at any age. Tonometric pressure is takeu before the iustillatiou of the mydriatic and two hours after its instillation, which should pick up every potential case of glaucoma. What is meant by the nornal intraocular pressure of the eye is discussed. What is normal to one is not normal to another, although there is a general rule for this. He cites a case of a mau under observation from 1913 to 1934 who consisteutly had a pressure of 35 to 38 millimeters of mercury without any loss of central vision. The pressure is therefore uot so important if there is not any damage done to the eye. The tension is uot so important as loug as the central vision, the central visual fields and the peripheral fields remain normal.

Too strong aud too frequeut use of myotics cau do as much damage as not usiug any myotics at all. It may cause damage to the sphincter of the iris, to the nutritiou of the leus, with resultant cataract formation, and to the ciliary body with resultaut vitreous opacities. If more than a two per cent pilocarpine solution is required oftener than three times in twenty-four hours to maintain a uniform level of teusion, then you have a surgical eye.

"Operation For the Cure of Postauricular Fistulae." Samuel D. Greenfield, M.D. Brooklyn, N.Y. The Laryngoscope, April, 1940.

After a prelimiuary discussion as to the pathology of postauricular fistulae, the author under uine different heads outlines the treatment for their cure.

OPERATION. 1. Revision of the mastoid cavity. The incision is made through the old scar. As much periosteum is saved as is possible during the elevation of the tissues. The tissues should be handled very carefully. The anterior flap is freed far forward, the posterior flap is freed for only a short distance. Now all diseased tracts are thoroughly exenerated along with all granulations. 2. Next is made a sliding flap for relief of tension of the sutures. An incision is made about one and one-half to two inches posterior to the mastoid incision. The anterior flag of this incision is elevated along with the periosteum by usiug au elevator until it appears in the mastoid cavity indicating that the flap is free and will slide easily. 3. The temporal muscle flap is prepared by carryiug the original mastoid incision up over the temporal region for two or more inches. Bleediug, which is profuse is controlled. The muscle is freed from the underlying bone and a fan-shaped flap is cut with the pedicle attached anteriorly. This flap is pulled down into the mastoid cavity. This is held in place by suturing into the lower end of the wound. The point is stressed that this must be dry as well as the original position of the flap, lest the cavity fill with blood and infectiou set in. 4. The edges of the old scar are trimmed away allowing better coaptation of

the skin and underlying tissues. 5. The flaps are now prepared for sntnring. Primary union is to be desired in the mastoid incision. Two layers of sntures are used. The deeper tissnes are brought firmly together which tends to produce an abnndance of skin which comes together easily. Skin clips are used over the bony defcct. Too much pressure will cause sloughing and necrosis. 6. The posterior wound is closed with interrupted sntnres of silkworm gnt. Gaping is preferable to too much tension at this point. 7. A small rubber drain is inserted into the lower end of the mastoid wound. Another drain is sometimes used in the region where the temporal flap has been taken. 8. Vaseline gauze is used over the entire operated area to facilitate the next dressing. Firm pressure is used with gauze dressing and bandage to avoid collection of blood and exndate. 9. The first postoperative dressing is done on the third day. Clips and sutnres are removed on the fifth day. Wounds are completely healed by the end of the fonrth week.

"Bacteriological Studies of Acute Infections of the Middle Ear." L. Dell Henry, M.D. Hugh A. Kuhn, M.D. Hammond, Indiana. Annals of Otology, Rhinology and Laryngology, June, 1940.

Page reported a stndy of such cases done in the Manhattan Eye, Ear and Throat hospital occnrring in one year (836 in number). He found many interesting facts in the study. Some of these are: Mastoidectomy was necessary in three types of infections only; the hemolytic streptococcns, pneumococcus Type III, and the staphylococens; 30 per cent streptococcus, 23 per cent staphylococcus and 1 per cent pneumococcus. Mastoidectomies were done on 5.1 per cent of his cases. There were three times as many mastoids in those cases where the drum rnptured spontaneonsly as compared to those who had an early myringotomy. The seasonal variation was as follows: 36 per cent in the winter, 40 per cent in early spring, 13 per cent in the snmmer and 10 per cent in the fall. 468 cases total the authors are reporting.

All cases considered were acute—the average duration before being seen was eight days and none were older than seventeen days. There were 243 males and 225 females; 103 ear drums had rnptnred spontaneously and 365 were opened. Streptococens was fonnd in pnre culturc in ninety cases (25 per cent); the staphylococcus was found in pure enlture in 113 cases (32 per cent); the pnenmococcus was found alone in forty-two cases (11 per cent). Others showed mixed infections. Of the whole series (468) only thirty-one (6.6 per cent) developed a snrgical mastoiditis. All these recovered.

Page as well as the authors stress the importance of culturing the discharge (if myringotomy is done, culture from the knife) because it may indicate some prognostic valne. The authors conclude that there was only 49 per cent of their series that wonld have benefited from sulfanilamide or sulfapyridine.

"Otosclerosis Treated With Sex Hormones." J. Bernstein and Leon Gillis. The Lancet, 1939, ii, 1368.

This is a treatise on trne otosclerosis and is of nnusual interest. The authors are of the opinion that there is a close connection between the gonadal internal secretions and otosclerosis. Several possibilities arc mentioned among which is that there may be an imbalance between the male and the female hormones. If it is possible to dctermine which hormone is deficient, then this may be corrected by the giving of the deficient hormone. This then gives the patient afflicted with otosclerosis a possibility of improvement or arresting the progress of the condition without resorting to surgery or a medical treatment. The authors have been using their treatment as ontlined long enongh to either prove or disprove their theories. If medication arrests or improves the otosclerosis, then this must be an advance over the other medical treatments. Otosclerosis ordinarily prodnces progressively worse hearing. This series of cases reported show thirty-one improved and twenty five unimproved. All these cases were treated according to the author's method, i.e., injection of sex hormones, either homogenic or heterogenic. It is pointed out that mnch more work is necessary on this snbject in order to find the best method of using these sex hormones. Research along this line may clear up the obscure etiology of otosclerosis. There is not any reference to any other research along this line in their article. A correlation of the same might be of value and interest. According to the authors, presbyacusis reacts favorable when the hormones used were hetcrogenic.

PLASTIC SURGERY

Edited by George H. Kimball, M. D., F. A. C. S.
912 Medical Arts Building, Oklahoma City

"The Treatment of Dupuytren's Contracture." Henry W. Meyerding, M.D.. Rochester, Minnesota. American Journal of Surgery, July, 1940.

The anthor has reviewed the history of this condition from the year 1832, at which time it was described by a French Surgeon, Dupnytren. It was noted at that time that: "A person attacked by this infirmity attached to his finger a weight amounting to 150 pounds (68kg), without influencing in the least the degree of flexion." Operative treatment therefore became recognized as the method of choice, especially with the advent of aseptic surgery. Koch, in 1933, considered that Dupuytren's contractnre is a surgical condition; Sir William Fergnson, in 1842, had stated: "The fascia should be dissected ont at once."

The author continues to review the literature and describe the different complications that have been encountered in conditions of this kind. He also classifies the deformity into Grades 1, 2, 3, 4. He claims to have seen 315 patients who have been afflicted with this condition and states that he has operated on more than 100 of them.

He gives the following summary of his experience.

It is evident from a review of the literature that conservative treatment, namely, stretching, heat and massage and the use of ointments and irradiation, has failed to prevent or cure Dupuytren's contracture. Following an experience of more than twenty years, during which time I have seen 315 patients who were afflicted with this condition and have operated on more than 100 of them, I have come to the conclusion that the operation of choice is surgical excision of the involved palmar fascia.

The result has been satisfactory in about 90 per cent of the cases. Subcutaneous section of the constricting bands of palmar fascia is a satisfactory method of treating certain patients. A carefnlly managed program of physical therapy is necessary. A combination of excision, splinting and physical therapy results in a useful fnnctioning extremity.

Comment: This is one of the most extensive reports in regard to Dupuytren's contractnre that has appeared in recent years. The references include a good portion of the literatnre on the subject. I believe that anyone interested in this condition should avail himself of this report.

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D., F. A. C. S.
605 N. W. 10th, Oklahoma City

"Polyostotic Fibrous Dysplasia. Report of a Case.' Thomas Horwitz and Abraham Cantarow. Archive of Internal Medicine, LXIV, 280, 1939.

Lichtenstein and Jaffe, in 1938, employed the terr "polyostotic fibrous dysplasia" to designate th condition which had been variously described i the literature as osteodystrophia fibrosa unilaterali

osteitis fibrosa localisata, osteodystrophia fibrosa cystica generalistata, fibrous osteodystrophy, osteitis fibrosa disseminata, etc.

The authors' patient, a woman, aged twenty, was admitted to the Jefferson Medical College Hospital in 1937, complaining of pain in the region of the hips and increasing deformity of the thighs of nine years' duration. There was marked bowing of the thighs, particularly of the right, with shorting of the right leg. Roentgenographic examination showed many circular radiolucent areas in the pelvis, diffuse osteoporosis of the femora, tibiae, and fibulae, and changes in the bones of the feet. The serum calcium, phosphorus, and protein were not remarkable, but the serum phosphatase was elevated. Biopsy of the left femur revealed replacement of the spongy bone and marrow cavities by very cellular fibrous tissue, in which numerous areas of osteoid tissue and spicules of calcified bone were scattered. Exploration of the neck revealed no evidence of parathyroid tumor.

Although the roentgenographic findings were rather characteristic of osteitis fibrosa cystica dependent upon hyperparathyroidism, the early age of onset, the blood chemistry, the absence of parathyroid tumor, and the normal urinary excretion of calcium and phosphorus were strongly against this diagnosis.

"Protruded Intervertebral Disks with a Note Regarding Hypertrophy of Ligamenta Flava." J. Grafton Love. Jr. A.M.A. CXIII, 2029, Dec. 2, 1939.

During the years 1935, 1936, and 1937, only 1.8 per cent of over 300 patients seen at the Mayo Clinic by orthopaedic consultants for low-back pain and/or sciatic radiation underwent operation because of a diagnosis of protrusion of the intervertebral disc. The symptom complex presented by these patients was low-back pain with sciatic radiation, spasm of the lumbar muscles, loss of the normal lumbar lordosis, positive Lasegue and Kernig signs, sciatic tenderness, and decrease or absence of the tendo achillis reflex. If the total spinal-fluid protein is elevated and the roentgenogram shows narrowing of the fourth or fifth lumbar intervertebral disc, the diagnosis is almost certain. The author usually relies on confirmation by an opaque intraspinal substance as seen roentgenographically, but he has recently operated on eleven patients with proved prolapsed discs despite the fact that roentgenographic findings were negative. Hypertrophy of the ligamentum flavum is usually associated with protrusion of an intervertebral disc; in only twelve patients was there hypertrophy of the ligament without an associated prolapsed disc.

Surgical treatment is advised and consists in the removal of the excessive portion of the prolapsed disc through a small laminectomy wound, great care being taken in the handling of the nerves and in hemostasis. Postoperative treatment is simple; no casts or splints are used, and patients are allowed as much freedom as possible. Frequent neurological examinations are made, and, if there is an increase in the findings, a postoperative hemorrhage should be ruled out. One postoperative hemorrhage and one postoperative death are reported.

CARDIOLOGY

Edited by F. Redding Hood, M. D.
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"Examinations of the Heart." — Published by the American Heart Association. The following article is the first part of a pamphlet published by the American Heart Association, under the direction of Howard B. Sprague, M.D., with the assistance of Harold E. B. Pardee, M.D., Samuel B. Scholz, M.D. and Harry E. Ungerleider, M.D.

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NOTE—This article contains the fundamental elements of cardiac investigation. Due to the limited circulation of these pamphlets it is well worth repeating here.

Examination of the Heart

The purpose of this article is to outline the clinical examination of the heart without the help of any instrument other than the stethoscope. The techniques of inspection, palpation, percussion, and asculation are used to answer a few definite questions. These questions are: (1) What is the size of the heart? (2) Are there any abnormalities in the cardiac sounds? (3) Are there any murmurs present in the heart, and, if so, what is their significance? (4) Is there any abnormality in cardiac rhythm? The proper answer to these questions will determine whether or not further investigation is necessary, such as X-ray and electrocardiographic study. It is often very much easier on examination to be sure of definite pathological changes in the heart than it is to be certain that no disease is present when the findings are equivocal.

Cardiac Size

The size of the heart is at times quite difficult to determine with accuracy by any method, particularly in obese or very muscular subjects, and when the chest is emphysematous, but the older procedures of palpation and percussion still yield very useful information. The position of the apex impulse can often be determined by inspection, and inspection should be checked by palpation and percussion. The left margin of the maximal apex impulse is the most accurate point for determination of the left border of the heart. When the left ventricle is enlarged, this impulse may be so diffuse that percussion dullness will be found considerably to the left of the impulse. In most cases, however, the left border of the heart by percussion and the left margin of the apex impulse will coincide. The left border of the heart at the apex should not lie outside the midclavicular line. This line, which is a perpendicular dropped from the midpoint of the clavicle, is a better landmark for comparison with the left border of the heart than either the nipple line or an arbitrary measurement from the midsternum. The apex is usually located in the fifth intercoastal space in adults, but often in the fourth space in children under the age of seven. Enlargement of the left ventriele occurs downward as well as to the left, particularly in aortic insufficieney, and the finding of the apex in the sixth interspace should make one suspicious of cardiac enlargement, even if the apex is not outside the midclavicular line. Infrequently, the apex is situated in the sixth interspace in normal subjects of asthenic habits with vertically placed hearts.

In percussing the left border of the heart, the percussion should be carried mesially from the axilla to a point of quite definite dullness. In contrast, when percussing the right border of the heart in the fourth interspace, the first slight change in percussion note as one nears the sternum should be considered as the right border of dullness. Two other percussion areas should be noted, that is, the left border of dullness in the third space, and the right border in the second space. In the normal heart, there should be no perceptible change in the percussion note in these areas until one reaches the sternum, but if definite dullness is found in the third left space, it is suggestive of enlargement of the right ventriele, or pulmonary conus, or, rarely, of the left auricle or its appendage. Dullness in the second and third interspaces is suspicious of an increase in the size of the vascular pedicle, especially the first portion of the aorta. An attempt at percussion of the so-called supracardiac or great vessel dullness is of little use unless the great vessels are considerably enlarged, as the normal aorta passes backwards in the chest and cannot be percussed. While enlargement of the left ventricle may be demonstrated reasonably well, enlargement of the other chambers cannot be detected on physical examination unless advanced changes are present. Therefore, further study by roentgen methods is frequently necessary, as for example, when one desires to know the size of the left auricle in suspected mitral valvular disease, or the width of the aorta when luetic aortitis is suspected.

Palpitation of the heart is of importance in two respects; first, in finding the maximal apex impulse; and second, in discovering thrills over the aortic and pulmonary valve regions. In the latter cases, a rough murmur will give a hint as to the possible presence of a thrill in these areas. It can be considered an accurate rule that a significant thrill cannot be palpated over the precordium unless there is an audible murmur. For this reason, thrills associated with murmurs, which are themselves diagnostic, are of relatively little importance. Such a thrill is the apical diastolic (presystolic) thrill occurring with the diastolic murmum of mitral stenosis. The continuous, often widespread, thrill felt with patent ductus arteriosus, gives only confirmatory evidence to the continuous murmur. Palpation will sometimes discover a slight extra thrust of the apex in diastole in gallop rhythm more readily than the ear may detect the sound by the use of the stethoscope. A forceful impulse to the left of the lower sternum, combined with abnormal dullness over the lower end of the sternum, is evidence of right ventricular enlargement.

Cardiac Sounds

Alteration in the suonds of the heart are often as important as cardiac murmurs. However, the determination of the normal intensity of the first and second sound for a given individual may be very difficult. It must be reached only after considering the thickness of the chest wall as altered by obesity, heavy musculararature, and breast tissue, and the modifying influence of emphysema. In the timing of all heart sounds and murmurs, it is recommended that the examiner listen first at the base of the heart in order to fix in his mind the position of the sharp second sound in the cardiac cycle. He can then move the stethoscope gradually toward the apex and retain the position of this in relation to other sounds and mumurs. Some examiners are satisfied to time the first sound by the apex impulse or the carotid pulse. There is, of course, a slight delay between the first sound and the carotid pulse which makes timing somewhat difficult by this method if the heart rate is rapid.

Marked diminution of the intensity of the first heart sound at the cardiac apex in a person with a chest of ordinary thickness should make one suspicious of myocardial weakness or disease. Marked accentuation or a sharp quality of the first sound should make one listen at the apex very carefully for the late diastolic murmur of mitral stenosis. Splitting of the first sound may be a normal physiologieal occurrence but may also occur at times when bundle branch block is present due to asynchronism in the onset of contraction of the ventricles.

Accentuation of the aortic second sound is found with systemic hypertension, with atheroma of the aorta, and in some cases of luetic aortitis. Accentuation of the pulmonic second sound is found in patients in whom the pressure in the pulmonary circulation is increased (especially when the left ventriele fails or in the presence of mitral stenosis). Splitting of the second sound at the base of the heart is due to asynchronous closure of the aortic and pulmonary valves. A certain amount of splitting may be physiological, but definite reduplication of these sounds at the base suggests an increase in pressure in either the greater or the lesser circulation. The second aortic sound is often diminished or absent in aortic regurgitation. Its marked decrease or absence in association with a systolic murmur at the aortic area is important evidence of aortic stenosis.

In most children and in many young subjects, particularly those with thin chests and active circulations, the normal third sound may be heard shortly after the second sound in the region of the apex. This sound is of low pitch and intensity and is best heard by employing the bell type of stethoscope chest piece lightly applied to the chest wall, with the subject in the recumbent or left lateral recumbent position. It occurs at the time of rapid ventricular filling. The presence of a third

heard sound should be regarded with suspicion in persons of middle age or older. An accentuation of this sound, particularly in association with a first sound of poor quality, is the most common mechanism in the production of pathological gallop rhythm. The gallop sound can frequently be intensified by accelerating the heart with exercise. This accentuated sound in diastole may also be associated with a third impulse, as noted above, which can be seen and felt in the region of the apex. It is evidence of ventricular dilatation. Accurate appreciation of the timing and character of the third sound in normal individuals, and its acceutuation in gallop rhythm, is a most important evidence of a skilled examination of the heart.

INTERNAL MEDICINE

Edited by Hugh Jeter, M. D., F. A. C. P., A. S. C. P.
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"Conferences on Therapy: Treatment of Blood Disorders: VI Pernicious and Other Macrocytic Anemias."

Note.—These are the actual reports, slightly edited, of conferences by the members of the Departments of Pharmacology and of Medicine of Cornell University Medical College and the New York Hospital, with the collaboration of other departments and institutions. The questions and discussions involve participation by members of the staff of the college and hospital, students and visitors. The Journal of the American Medical Association, Volume 115, Number 1, July 6, 1940.

This article might be termed a dry clinic on the subject of macrocytic anemias. Fundamental points in the history, such as the discovery of the importance of liver therapy by Dr. Minot, the intrinsic factor in some way related to gastric juice by Castle, are described. Practical points in the diagnosis of the various types are brought out. Theories of the mechanism of the disease are mentioned. Questions and answers bring out nicely the practical treatment of Addison's anemia more particularly, and the therapy of the other macrocytic anemias are also to some extent discussed. The following is, in brief, an interesting summary of the treatment.

The objective of treatment theu is the restoration of the antianemic principle, and this is done by the administration of liver or extracts of liver. There are effective by mouth, but by this route the extracts are only from one-fiftieth to one one-hundredth as potent as when given by iutramuscular injection. Liver is rich in the extrinsic material as well as the finished antianemic principle and of course also certain large amounts of the various vitamins. The impression prevails that the crude extracts are more effective, especially in relation to the cord lesions, than are the more highly purified concentrates of the anti-anemic principle. In cases of marked involvement of the nervous system it is recommended that liver therapy be supplemented with ventriculin, a preparation of the hog's stomach containing both the extrinsic and intrinsic factors of Castle, which is very effective in producing a reticulocyte response and in maintaining the normal blood picture.

In a fully developed case of pernicious anemia an injection of 15 units of extract is given daily for the first week and then three times a week until the blood is normal. The dose may unusually then be reduced, most patients requiring only 15 units every one or two weeks. With cord lesions the treatment is more vigorous and the crude preparation extracts are employed, the attempt being made to maintain the red blood cells at five million or more. This treatment may be supplemented with the oral administration of liver and ventriculin, the latter in amounts of about 20 units a day with meals.

Irou is usually not required and should be withheld at least until after the effectiveness of liver therapy has been ascertained.

"The Present Status Of Thrombocytopenic Purpura, With Special Reference to Diagnosis and Treatment." By B. K. Wiseman, M.D., C. A. Doan, M.D. and S. J. Wilson, M.D., Columbus, Ohio. The Journal of the American Medical Association, Volume 115, Number 1, July 6, 1940.

This is an excellent review of the present status of this disease. Interesting diagnostic criteria are given as follows:

1. There must be spontaneous purpura and/or free bleeding from the mucous membranes.
2. The blood platelets must be substantially decreased in numbers, less than 100,000 per cubic millimeter of blood.
3. The clotting time and prothrombin time must be within normal limits.
4. The anemia and leukocyte count must not be out of proportion to the amount of bleeding.
5. There must be no pathologic cells in either the blood or the bone marrow.
6. There must be no recent history of the ingestion of drugs or the occurrence of those diseases known occasionally to produce thrombocytopenia.
7. There must be no appreciable enlargement of the spleen or lymph nodes.

A procedure for handling these cases is given and in this the indications for surgery and the choice of the cases for surgery are clearly set forth.

The authors couclude that no single theory adequately accounts for the production of the disease.

In the differential diagnosis, aspiration of bone marrow is necessary to rule out leukopenic leukemia, hyperplastic anemia, pernicious anemia and neoplasia. History, as regards consumption of neutropenia producing drugs, is esseutial. Splenectomy is pronounced the only measure known to restore the normal platelet count.

No case of symptomatic thrombocytopenia should be admitted to surgery.

UROLOGY

Edited by D. W. Branham, M. D.
502 Medical Arts Building, Oklahoma City

"Sulfathiazole Treatment of Urinary Tract Infection." Ormand S. Culp, John Hopkins Hospital, Baltimore. Journal of Urology. July, 1940.

A new sulfauilamide derivative was tried clinically at the Brady Urological Institute. A great variety of infecting organisms were encountered and thirty patients in all were treated with this preparation.

Excellent results were obtained in sixteen cases wherein the drug was used for complete sterilization of the urine; poor results were noted in eight cases.

In six cases of acute pyelitis, symptomatic improvement was noted in all cases.

Toxic manifestations were observed in 23.3 per cent of the patients given the drug. They were all similar to those observed with the usual sulfanilamide preparations.

From this report, the conclusions were that sulfathiazole was an excellent urinary antiseptic if administered under favorable conditions and with great care. The incidence of toxicity makes it imperative to follow all patients at frequent iutervals.

Comment: I have had only slight experience with this drug, insufficient to draw many definite conclusions, but my impressions reinforced with the reading of this article are that little more therapeutic benefit is present with sulfathiazole as over other types of like preparations. There are now undergoing experimental

trial many derivatives of these preparations, some more or less toxic than others but the therapeutic effectiveness seems not much materially increased over sulfanilamide in so far as their use in urology is concerned.

Sulfathiazole is yet an untried drug and requires much further observation before its exact therapeutic status is determined.

"Cutaneous Ureterostomy For the Relief of Intractable Bladder Tuberculosis." Edward L. Keyes, Journal of Urology, July, 1940.

The author reports on his experience with this operation citing brief case records of six patients on whom he has performed such surgery.

Its simplicity of technique give it much merit in the control of this distressing complication and Dr. Keyes considers it a surgical procedure that has more to offer than would be supposed. His six cases that he details seem to bear this contention out. All obtained relief from the pain and frequency and curiously enough it seemed to delay the progress of the disease in two instances. He ascribes this to better drainage of the kidney.

Comment: Certainly there is much that can be said for the procedure. Advanced tuberculosis of the bladder is one of the worst afflictions that beset mankind in so far as personal discomfort is concerned. These unhappy sufferers are deserving of any procedure that seems to offer relief from the pain they endure even if it be for only a few months.

Cutaneous ureterostomy is a simple operation and does satisfactorily side-track the urine from the bladder.

"The Prophylaxis of Pyeloureteritis Gravidarum." Herbert L. Trout, M.D., D. Scott Bayer, M.D. and Charles M. McLane, M.D. American Medical Journal. July, 1940.

This is an excellent and most timely article that details the management of infections of the urinary tract in pregnancy. It particularly stresses the preventive aspect of these infections and cites statistics to prove that through proper care the incidence of this disease can not only be decreased 50 per cent but, in addition, the serious complications resulting from pyeloureteritis may be practically eliminated.

Essentially the routine of management resolves in a strict appraisal of the patient through careful history as to their predisposition to the disease and thereafter throughout the prepartum period a meticulous examination of the urine for the presence of infection. If infection is present, urinary antisepsis is begun and continued to a varying degree in an attempt to maintain sterile urine. The drug utilized for this purpose is sulfanilamide.

Comment: I am happy to see such an article presented to the profession as it brings to the fore an aspect of prenatal care not infrequently neglected i. e., urinary tract infection. Pyelitis is one of the most common and distressing conditions that affect the pregnant patient. Too often urine examinations are made solely to determine the presence of albumen and no attention paid to the presence of infection. Every woman in the early months of her pregnancy should have a thorough urine examination made from a catherized specimen to determine whether bacilluria or pyuria is present. Appropriate medication instituted early in such instances where infection is actually present will prevent much of the morbidity that so often follows.

Cancer Institute to Publish Journal

Announcement has been made by the National Cancer Institute, Bethesda, Maryland, of the forthcoming publication of the Journal of the National Cancer Institute. The magazine will be published bi-monthly, and will contain articles by members of the staff of the institute, which is a unit of the National Institute of Health,

DIGITALIS FOR OBESITY

"Too much publicity has apparently been given to the reports of a method of weight reduction which involves administration of digitalis for suppressing the appetite," *The Journal of the American Medical Association* says.

"The underlying thesis that the food intake determines the weight is, of course, correct; definite suppression of appetite will ordinarily be followed by loss of weight. Moreover the use of ipecac and similar drugs may result in a loss of appetite even before nausea and vomiting are manifested. Whether or not digitalis can produce a loss of appetite without harmful effects is more debatable. The work of Hatcher and Weiss in particular has shown that the nausea produced by digitalis is a reflex the sensory organs for which do not appear to be located in the heart. Thus the type of nausea which digitalis produces is at least partly due to factors other than gastric irritation. Indeed, nausea and vomiting are toxic symptoms of digitalis and constitute a warning to decrease or stop the administration of the drug.

"The observations reported by Bram on this method of reducing body weight (wherein he reports effective results) have attracted the attention of some writers for the public. Confirmatory evidence for his views is lacking. The method cannot be generally recommended unless its efficacy and safety have been thoroughly demonstrated by carefully controlled observations. At present the use of this technic is clearly in the experimental stage and uncontrolled use should be discouraged."

Ether Used For Dissolving Gallstones

Certain gallstones can be dissolved by ether, C. M. Burgess, M.D., Honolulu, T.H., declares in *The Journal of the American Medical Association.*

Such stones, he says, must be of pure cholesterol (fatlike substance) or fragments of stone bound together by cholesterol. Furthermore, these stones must be so situated that they are available to a direct bath in ether. The stone made up of fragments pieced together by cholesterol when bathed with ether will become fragmented and the pieces if not too large will then be passed.

With these restrictions it is readily seen that only a few patients with gallstones will lend themselves to this treatment. Dr. Burgess says that the procedure appears heroic but, he continues, "it has been done in enough instances to make one feel safe in its use when done properly."

Solubility is not a natural characteristic of most gallstones.

Surgical intervention of the biliary tract, as of no other portion of the human body, places on the surgeon the greatest responsibility. It requires the utmost in surgical judgment, operative skill and postoperative care, thus making dissolution of gallstones a most specialized but welcome procedure in a few cases.

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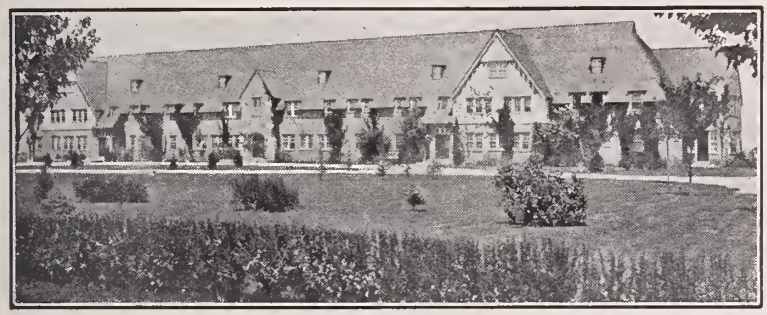
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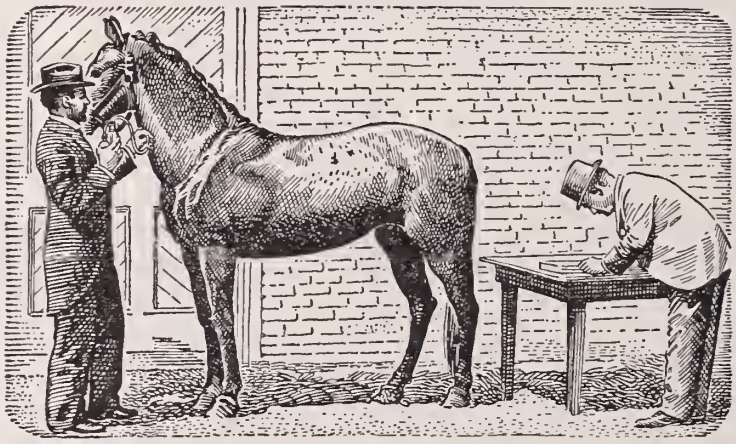
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Sanatorium Care*

F. P. BAKER, M.D.,
TALIHINA, OKLAHOMA

For many centuries people afflicted with tuberculosis have been advised to change climate and environment. In early days, they were advised to go to the sea shore or some high mountain area.

In this country, Dr. Edward Livingston Trudeau[1] became aware that he was afflicted with tuberculosis of the lungs in 1872 and he went to the Adirondack Mountains for a cure. A person afflicted with tuberculosis this day and time probably would never have been able to endure the hardships Dr. Trudeau went through. He opened and operated the "Adirondack Cottage Sanatorium in 1884 at Saranac Lake, New York."

From this beginning the modern Sanatoria in America got their start. Fresh air was the all-important factor in the cure in the days of Trudeau, with rest and nourishing diet secondary. Along the first decade of the new century, forced feeding, especially raw eggs and milk, seemed to be more important than rest and fresh air. Since about 1920, when artificial pneumothorax came into common usage in the Sanatoria, rest became the most important factor in the cure.

The function of a State Sanatorium is to admit patients who are in need of hospitalization because of tuberculosis. Since the institution is tax-maintained it is desirable to care for those people who can be benefited quickly and returned to their homes so there is a constant turnover with as little waste of time as possible. For years the sanatorium has been able to care for slightly more than half the number of patients applying; therefore, some selection of patients to be hospitalized is mandatory if the best results for patients and state are to be had.

The purposes of the sanatorium are threefold; curative, educational and isolation. There is a form for application of a patient to the Sanatorium which has on one side questions to be answered by the patient and on the reverse side physical examination by a doctor showing that the patient has tuberculosis of the lungs and to what degree. Below this is a space for the county commissioner or judge to sign showing the person is a bona fide resident or citizen of the state and that their financial status is such that they are or are not able to pay for their maintenance ($10.00 per week). This application, when properly completed, is mailed to the Superintendent of either the Clinton or Talihina State Sanatorium, and in most cases as has been necessary many years, the name is placed on a waiting list and the patient called when a bed becomes vacant, in their turn on this waiting list.

When a person is called into the Sanatorium a history is made immediately on entrance. This history records the usual information required of such histories except detailed questioning as to duration of disease, source of infection and probable number of contacts made since the disease has been known to exist, especially the immediate family. The patient is then told to always expectorate in a sputum cup, never to cough without covering mouth and nose with tissue papers provided for that purpose. They are told about rest hours, advised about rules governing patients and assigned to a bed, usually in the hospital, a building for non-ambulatory patients. The temperature,

*Read at the Tuberculosis Symposium, Annual Session, Oklahoma State Medical Association, May 8, 1940, in Tulsa.

pulse, and other bedside information is recorded on a chart at various intervals. The ward doctor, one of the resident physicians, makes at least two visits daily. X-Ray, laboratory and physical examinations are obtained and the first Saturday after admission of the patient (unless in exceptional cases) a staff conference is held. All available information is gone into, a diagnosis is made, and the patient is called before this conference to be told the opinion of the staff. Many times they are shown the X-Ray to impress on them the truth and seriousness of the diagnosis. They are then advised what the treatment is to be. Always rest in bed and many times some form of collapse of the lung or lungs. They are also told the prognosis as nearly as is humanly possible to tell them. A tuberculous person has a much better chance if the facts are told them in the beginning. It is difficult to get any reasonable cooperation from a person who does not know the truth of his condition. Tuberculosis is a very ruthless disease to the uninformed and the person who is afraid to face the facts.

After this consultation, the patient starts the routine which in most cases is complete bed rest with probably artificial pneumothorax, although over one-third of the patients admitted cannot take any form of collapse because of their advanced stage.

The stages of tuberculosis are classified as; 1. Primary infection (childhood) 2.Minimal. 3. Moderately Advanced. 4. Far Advanced (secondary infections). The last three classifications are each further divided in groups of a, b and c, according to the systemic and physical reaction to the toxins of tuberculosis. Far Advanced "C" would indicate a terminal state.

"Minimal[2] is a very early secondary infection with only a slight infiltration in some area or areas of the lungs, usually the apices. Moderately Advanced is more extensive infiltration of a whole lobe of one lung with little or no visible cavitation and no serious complications. Far Advanced shows definite evidence of marked cavity formation or other tuberculous complications."

After the patient has been on treatment thirty to ninety days the amount of exercise and activity or up hours may be increased if the toxic symptoms, such as fever, cough, shortness of breath, etc., has improved. Some recreational activities are provided for a person as soon as they reach a state of improvement that will permit it. One picture show a week (modern talking), Sunday School and church services on Sunday, educational talks on some phase of tuberculosis which patients should know in order to cure and prevent tuberculosis, lunch with members of the family on the grounds at properly spaced intervals, and any band, orchestra, high-school play or other wholesome entertainment that can be gotten from outside from time to time.

Food is also a very important item in a sanatorium. It must be wholesome and well-cooked. Milk and eggs always play a prominent role in the feeding of tuberculous people. We do not now believe they should be given to the point where other foods cannot be tolerated. Vegetables and fruits are very important. Because of the nature of the rest cure, to be able to keep tuberculous people constantly pleased with their food would try the patience of Job.

A patient must have the feeling that he is in the right place and receiving proper treatment if the best results are to be had. Homesickness is one of the greatest enemies we have, but this is partly overcome in a sanatorium because everyone else is in the same plight and a psychology is developed that tends to think more of getting well than going home. It is a fact if we can persuade a patient to stay three weeks, the per cent who go home because of homesickness is greatly reduced. The general atmosphere at the sanatorium is one of cheerfulness and everyone is hoping for a cure. Even when told the chances are very poor, the average person is still hopeful that there has been a mistake in his personal case.

Sanatorium patients do well because they acquire a different outlook on tuberculosis and recovery than they had at home. It is a fact, however, that a very small per cent can never become adjusted to an institution and are better off at home even if they endanger the rest of the family.

Doctors, nurses, waitresses, cooks and all sanatorium employees are trained to handle this disease and to develop the peculiar bedroom manner that will fit the restlessness and irritability caused by long periods of rest and inactivity.

Patients may become semi-ambulatory and go to their meals, to the bath-room, and make their own beds, which by the way is not nearly so harmful to them as late parties, where they play bridge, poker and other types of entertainment that tend to stir their emotions and prevent relaxation. They then observe rest hours, which means in bed, prone or semi-prone, with no reading but complete relaxation from 9:00 to 11:00 a.m. Up at 11:00 a.m. and prepare for lunch, read, lounge around and rest again from 1:00 to 3:30 p.m. From 3:30 to 4:00 p.m., pulse and temperature are taken. They may be up then until 8:30 p.m., at which time they must go to bed, to rise again at 7:00 a.m.

If toxic symptoms disappear, normal weight is reached, fever free, cough lessened

or ceased, sputum lessened, etc., patients may start on graduated exercise. If the pneumothorax has the cavity closed, sputum is absent or persistently negative, the patient may go home if arrangements can be made to receive this treatment there and a suitable place can be had to carry on the rest treatment.

Since institution of the various forms of surgical collapse of the lungs and especially intrapleural pneumolysis, in conjunction with unsuccessful pneumothoracis, pneumothorax, phrenic nerve crush and various stages of thoracoplasty, sanatoria have been able to double their turnover.

Our aim is to get the patient negative for the tubercle bacillus as soon as possible. A mere negative sputum or even series of negative sputums is not always sufficient. And ative, stomach lavage and smear has shown sputums is not always sufficient. And the tubercle bacillus which could not be found any other way.

When a patient leaves the sanatorium, he is classified as:

1. Dead.
2. Unimproved: progression of the disease.
3. Improved: constitutional signs lessened or absent, cough and expectoration with bacilli usually present. Physical signs and X-Ray findings are those of a stationary or retrogressive lesion.
4. Quiescent: absence of all constitutional symptoms, expectoration and bacilli may or may not be present, physical signs and X-Ray findings to be those of a stationary or retrogressive lesion, the foregoing conditions to have existed for at least two months.
5. Apparently Arrested: all constitutional symptoms and expectoration with bacilli absent for a period of three months, the physical signs to be those of a healed lesion. X-Ray findings to be compatible with physical signs.
6. Arrest: same as apparent arrest, except for a period of six months.
7. Apparent cure: same as Arrest except for a period of two years.
8. No Active Tuberculosis Found: naming non-tuberculous disease, if any.

Obviously we have few of the Arrested and Apparently Cured cases on our list because we need the bed space; however, many patients, after an Apparently Arrested state, start gradually working at the santorium as assistant nurses, orderlies, laboratory assistants, or office assistants and stay until apparently cured.

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Leprosy In Oklahoma*

Case Report

ONIS GEORGE HAZEL, M.D.
WAYNE M. HULL, M.D.
OKLAHOMA CITY, OKLA.

Leprosy is one of the oldest diseases known to man. In the old and new testaments of the Bible there are one hundred and seventy-three verses devoted to the subject of leprosy. One of the three signs that God gave to Moses was that he would give him leprosy and as rapidly remove the disease from him. We now know that most of the skin diseases described in the Bible were not leprosy, but psoriasis.[1]

It has been estimated that there are from one to four million lepers in the world today.[2] Widespread occurrence of the disease is found in India, China and the Philippines and certain parts of Africa. The disease still smoulders in many other areas, such as, Puerto Rico, the Virgin Islands, certain European countries and the Americas. Leprosy was not an uncommon disease in the delta of the Mississippi River one hundred and fifty years ago. In 1894, Louisiana moved its lepers to Carville, which in 1921 became a Government hospital.[3]

In Oklahoma the incidence of the disease has been very small. In the records of the leper colony of Louisiana only two cases were native Oklahomans. One was admitted from Colorado, and the other from Texas. There have been four other persons admitted from Oklahoma since 1921, but they were not natives of the State. In the past twenty years two cases of leprosy have been seen by Dr.

*From the department of dermatology, University of Oklahoma, service of Dr. E. S. Lain. Read before the Section on Dermatology and Radiology, Annual Session, Oklahoma State Medical Association, May 7, 1940, in Tulsa.

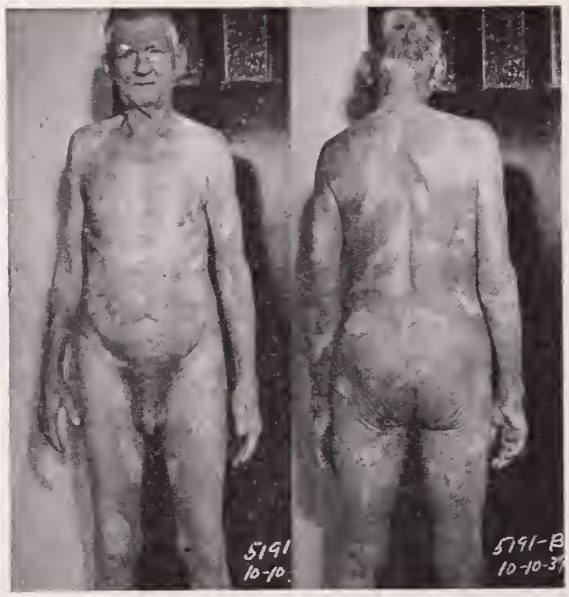


Fig. 1. Author's case. Maculo-anesthetic and nodular lesions. The right hand shows the atrophy of the interosseus muscles. Hansen's bacillus present in the nodular lesions.

Fig. 2. Author's case. The dark areas represent the maculo anesthetic lesions. Note the small nodules over buttocks and thighs.

E. S. Lain, of Oklahoma City, and two cases have been observed by Dr. James Stevenson, of Tulsa. The case reported here will go to Carville soon.

ETIOLOGY

Mycobacterium Leprae was first described by G. A. Hansen.[4] It is still believed that Hansen's bacillus is the cause of leprosy even though it has not satisfied Koch's postulates.

CLASSIFICATION

Hopkins and Denny[5] have recorded those cases showing nerve symptoms as nerve leprosy, including in this type cases presenting anesthetic macules with an annular configuration. This type of macular lesion is found often in the otherwise pure type of nerve leprosy, but seldom in the pure type of skin leprosy. The skin type includes those cases presenting nodules, tumor masses, infiltrated elevated patches and those macules (not necessarily anesthetic) that do not show any central clearing in the lesion. The mixed type includes both the lepromatous (nodular or tubercular) and neural forms in one patient.

SIGNS AND SYMPTOMS

Cochrane,[6] who is secretary to the British Empire Leprosy Relief Association, has given the following signs and symptoms in the two types of leprosy.

"*Nerve Leprosy*: The earliest signs of the disease are most often signs of nerve involvement: These show themselves in four ways:

(a) Depigmentation—The patches are light in color, but in a very dark skin may have a coppery appearance. The depigmentation is never absolute as in vitiligo. The patches are smooth and may or may not be anesthetic.

(b) Anesthesia — This is the most common sign of nerve involvement. Fine temperature sense is first lost, next fine superficial touch sense, and, later, gross pain and temperature sense, and lastly, deep pressure sense.

(c) Nerve enlargement — The most common nerves to become enlarged are the ulnar at the elbow, and the peroneal as it winds around the fibula. The neuritis may be very severe.

(d) Muscular paralysis—This is usually a late manifestation and by the time this is apparent, the diagnosis is beyond doubt.



Fig. 3. Lepromatous leprosy. Case seen by Drs. E. S. Lain and A. R. Lewis in 1919. Patient died at Nowata, Oklahoma, six months later.

Skin Leprosy: If the early nerve leper remains untreated, he may sooner or later begin to show skin manifestations. When the disease has reached the stage of skin nodules, the organisms have been distributed throughout the body and the disease has become disseminated. Therefore, it is at this stage the leper most frequently complains of rheumatic pains, general malaise and periodic febrile attacks, which may last from a few days to many weeks." This form is commonly called lepromatous leprosy.

Leprous lesions generally consist of masses of connective tissue in which there is infiltration of lymphocytes, plasma cells, and other types of mononuclear cells. The lymphocytic infiltration is most marked around the vessels, especially throughout the corium.



Fig. 4. Lepromatous leprosy. Case of Dr. M. M. Roland. Seen at Muskogee, Oklahoma, in 1911.

The organisms may be found in the walls of the vessels and scattered in masses throughout the corium, particularly in the so-called large foam cells. The leprosy bacillus may, also, be demonstrated in the nerve sheaths, sebacious glands, the sweat glands, and sometimes in the epidermis.

DIAGNOSIS

A diagnosis is made from the presence of the signs and symptoms previously discussed, and the finding of the microbacteria leprae in the nasal secretions or in the skin lesions.

COURSE

Leprosy tends to be a self healing disease. The leper usually dies from some intercurrent infection, but sometimes as a result of the cachexia induced by repeated reactions. If this does not happen and the disease continues to its ultimate end, it leaves the patient deformed and mutilated. It is convenient to describe three stages in leprosy:

(a) The early stage when the body has acquired no resistance to the organism

(b) Stage of commencing resistance, when the body shows signs of reacting to the invading bacilli

(c) The stage of subsidence of the disease

TREATMENT

Since leprosy is a chronic disease, the success of one's treatment depends as much on the maintenance of the patient's general health as on any specific remedy used. This



Fig. 5. Lepromatous leprosy. Case of Dr. E. S. Lain. Treated at University Clinic 1918-19. Patient's brother also had leprosy.

means the treatment of any predisposing disease and the use of good food, exercise, occupational therapy, fresh air, and strict personal hygiene.

Specific treatment: Practically everyone remains attached to chaulmoogra oil or its esters. Charles Flandin,[7] in France, uses a cholesterol-Chaulmoogric compound intravenously. It is a colloidal suspension containing three per cent of chaulmoogric extracts. He reports very good results in acute cases.

Potassium iodide and protein shock have a limited use in selected cases. Vitamin B1

intramuscularly for the relief of nerve pain has been used with a high degree of success by Badger and Patrick.[8]

CASE REPORT

S. H., a white male, aged 63, was born in Tennessee and moved to south Texas at age three. He lived near Waco, Texas, for ten years before moving to southeast Oklahoma. Early in 1939, he first noticed sharp pains in the extremities. About March, 1939, he noticed weakness and fever. At this time he observed difficulty in breathing through his nose and that the nose and ear lobes appeared enlarged. The first skin lesions appeared as irregular-shaped, reddish plaques over the extremities. The patches soon spread over the entire body, and by July, 1939, he had lost his eye lashes and portions of the eye brow, and he had very little strength in his right hand. It was only a few weeks later that he burned his fingers while smoking. He reports that he was quite ill for several months, but was much improved when he came to the University Hospital on August 16, 1939.

Examination — A well developed, fairly well nourished white male about sixty-five years old. The face showed many areas of infiltration which gave him a deformity described as leontiasis. The ear lobes were thickened. The nose, chin and forehead were enlarged. He breathed through the nose with moderate difficulty. The chest revealed no abnormalities. The pulse was 70, the respiration 20, and the temperature 98. The abdomen did not contain any palpable masses. The ulnar nerves were greatly enlarged and tender. The fingers of the right hand were greatly enlarged and tender. The fingers of the right hand could not be straightened and there was marked muscular wasting. The peroneal nerves were less involved.

Skin—The greater portion of the skin was involved in reddish patches consisting of rounded, oval, and irregular macules, ranging in size from 3 to 10 centimeters. Many of the lesions had coalesced to form gyrate or polycyclic figures. These areas were either devoid of hair or had scanty hair growth. He had very little hair on the pubis and scalp. There was a loss of fine temperature and touch sense in the skin lesions. The right hand showed a loss of gross pain and temperature sense.

In addition to the macular plaques he had numerous pea sized subcutaneous nodules over the extremities and buttocks. The tubercle-like lesions were more pigmented on the surface than the large macular lesions.

Laboratory: He had a marked secondary anemia upon admission which remained unchanged during his hospital stay. His blood and spinal Wassermann tests were negative. Scrapings from the nasal passages were negative for leprae bacilli before and after sodium iodide. Three separate biopsies were made and studied.

Histopathology: The examination of several slides by the usual staining methods failed to reveal organisms. However, by the use of special acid fast stain for tissues, many acid fast organisms could be demonstrated. There was a marked cellular infiltration throughout the corium. There were many large cells with foamy cytoplasm throughout the inflammatory area, also, medium sized multinucleated giant cells. In most of the sections there was considerable healing. There was no evidence of caseation, but in some fields there was early necrosis. All smears taken from fresh tissue revealed many long, extremely slender acid fast bacilli arranged in bundles and parallel rows. The clinical and histopathological findings supported a diagnosis of leprosy.

Progress: He had been living under very poor conditions. He was put on a high vitamin diet and was given 2 cc. of liver extract intramuscularly every other day. He soon gained weight and the plaque lesions faded to a considerable degree after a month. He was not given any of the chaulmoogra oil preparations, and was dismissed October 15, 1939.

Subsequent progress: He was again seen and examined on April 7, 1940. He had continued to gain weight and felt generally improved. Anesthesia persisted in the plaques and over the arms and hands. He had the week before scalded his hands while washing, and had the right hand bandaged. The two hundred or more nodular lesions had all healed, leaving areas of cutaneous atrophy. He expressed an eagerness to go to the U. S. Marine Hospital at Carville, Louisiana, arrangements for which are being made.

SUMMARY

1. A case of mixed leprosy has been seen in Oklahoma and studied.

2. Marked improvement took place following non-specific treatment.

3. There has been a very low incidence of leprosy among native Oklahomans.

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The Advantages and Disadvantages of Prostatic Resection *

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Ever since Hugh Young devised the first prostatic punch, the dream of urologists has been to perfect a safe method of removing obstructing lobes through the urethra. This finally culminated some years ago in the development of modern resectoscopes, which were perfected and thrown indiscriminately on the market. They were exploited by commercial concerns who had little knowledge of the dangers and difficulties associated with their use, and the message was carried to patients by enthusiastic users of the instruments so that today there has been built up in the public mind a feeling that this is a simple, safe, and easy method of doing what was formerly considered a very dangerous and expensive operation. Even the medical profession has been led to believe that the mortality from this procedure is around one per cent, thus making it safer to have a transurethral resection than to do the simplest minor operation.

Such exceedingly favorable ballyhoo has been one of the main disadvantages of resection. On the face of it, it looked easy and simple and men who had never done major surgery of any kind felt that here was something which they could do with complete safety. All they had to do was pass an instrument into the bladder just like a cystoscope, look around, trim out the obstructing lobes, and withdraw, leaving benevolent nature to complete the healing process. Also to the patient this looked like common-sense and appeared to be much better than an open incision with its pain, disability, expense and danger of infection or hemorrhage. Neither they nor the doctors gave enough consideration to their dependence upon the operation of a high frequency machine or upon the continued functioning of a small light globe in the instrument or upon the proper flow of water in and out of the instrument. Only experience could teach them that the occurrence of any sort of mishap might stop the operation suddenly, leaving a bleeding point or traumatized area, which could later cause a real catastrophe to the patient. Accordingly, many lives have paid the penalty of inexperience, lack of equipment, or lack of consideration of all the circumstances surrounding the case. It is even now better for the man who only occasionally does a cystoscopic examination to operate upon his patient by suprapubic enucleation (an open surgical procedure with which he is familar) than to attempt a resection. Also it is far better to do this if he does not possess all the necessary equipment because due to failure of the equipment, he may place his patient in far greater danger than he would be by any open surgical procedure. As a matter of fact, even experienced urologists, who have done all types of major genitourinary surgery, had to go through a long period of self-training before any of them could be certain of doing a satisfactory resection operation. This is proved by the fact that the very men who now claim a mortality of one to one and one-half per cent reported mortalities of twelve to fifteen per cent in the beginning.

This leads to mention of the second disadvantage of resection. Its technique requires the doing of a number of operations before it can be learned sufficiently well to make the operator a good risk for the patient. It can be taught only by the actual process of doing it, and the teaching is more or less difficult because only one person can look through the cystoscope at one time. Other operations can be taught by diagrams and on the cadaver, and then actually letting the apprentice surgeon assist an older surgeon in doing them.

Resection not being so well adapted to such teaching, the result has been that experienced members of the profession, who have had sufficient training and experience to understand the difference between dangerous and non-dangerous surgical procedures, have been quite conservative in their attitude. Some have gone so far as to say that it should be reserved for only certain types of prostatic enlargement such as median bar. On the other hand, other men who have been fortunate in their experience have from the beginning insisted that any kind of prostatic obstruction could be removed in this manner.

During recent months writers have been trying to sift the truth from error as to the exact value of resection in prostatic surgery, and it seems to have been finally

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summed up well by Foley in a recent number of the Journal of Urology, wherein he says that resection is a procedure which should be done only by men of wide cystoscopic experience who are thoroughly at home when looking into a bladder. Dr. Henry Browne has also called attention to this fact and has urged that each resectionist equip himself with the various kind of telescopes so that he can see better what he is attempting to do. To the voices of these men I would add that the resectionist should be trained not only in cystoscopy but he should be a good abdominal surgeon so that he understands how to diagnose and control ileus, hemorrhage, peritonitis, hiccoughs, and other problems which are common to all forms of major surgery. Not only this but he should be perfectly able to do the major surgery required by rupture of the bladder, injury of the rectum, urinary extravasation, or massive hemorrhage. It cannot be too much emphasized that prostatic resection is a major surgical procedure of highly specialized type and is associated with many dangers, any one of which may call for old fashioned surgical knowledge. I mention this because I have observed that some of our very best resectionists are deficient in fundamental knowledge, which general surgeons learned years ago. For example, I have recently seen a case of general peritonitis with great distention being conscientiously treated by gastric suction, omission of all fluid and foods by mouth and so on, but at the same time giving the patient sulfapyridine by mouth. Sulfapyridine is an irritating drug. Any one who has had much experience treating peritonitis would know that the administration of such a drug through the stomach is going to increase irritation of the stomach and intestines. I have heard a good urologist advocate that even in the presence of a ruptured bladder, it is not necessary to open the abdominal cavity but that a suprapubic drainage of the bladder is all that is necessary. I submit that any man who has had general surgical training would feel that even if only one patient out of a hundred has infected urine or fluid in his abdominal cavity or tissues, that one person should have the benefit of abdominal drainage. The surgeon who has been accustomed to opening abdomens is not afraid to open them, whereas the man who has not had such training prefers to take the risk of not doing so. I am perfectly willing to grant that it is possible for a man to be an expert resectionist who has not had previous general surgical training; but it is not safe for him to do resections unless he is associated closely with a general surgeon of wide experience, who can come to his aid if and when needed. Even this has the disadvantage that the patient is subjected to extra expense of consultation, an objection which in this day and time is a serious one, because the public objects to having to pay too many specialists in the same case. They cannot understand why the man who operates upon them, whether it be by scalpel or a resectoscope, is not competent to carry them all the way through the operation.

I do not like any surgical procedure which is not done in full view of the operator and in a location where hemorrhage or other disaster can be controlled. This being the case, I was not too enthusiastic about resections in the beginning but rather felt that they were suited principally to median bar obstructions such as were amenable to the old cautery punch. Today with the more perfect instruments which are at our command and with the experience of ten years to draw from, I think there can be no question that resection is a satisfactory method of relief in at least eighty or ninety per cent of benign enlargements and certainly entails no greater risk to the patient than any other method of relief which has been developed through the years. In addition, it undoubtedly is less painful and cheaper for the patient. Having made this statement, I will now add that the remaining ten or fifteen per cent of cases may be treated by resection with the addition of suprapubic drainage. These cases fall into two general classes. First, those in which it is almost impossible to get the instrument into the bladder because of great deformity or enlargement of the lobes of the prostate, thus necessitating more trauma than an open suprapubic operation would call for. Second, those in which visualization is not good enough for the operator to understand the exact structure of the bladder neck, such as cases in which there is a lot of bleeding or where the fluid content of the bladder is so murky that the operator cannot see well, etc. In either of these cases a suprapubic opening should be made so that the operator can familiarize himself with the exact changes which have taken place in the bladder neck. If he then desires to do a resection in place of a suprapubic enucleation, he may do so with perfect ease and will be able to get his instrument into the bladder by inserting a finger through the suprapubic wound and assisting the instrument through the obstructing lobes. In such a case also he can do a resection with greater safety by occasionally palpating through the fistula and determining just where the instrument is and just how much has been cut away. I have done this on more than one occasion and have felt that it was less risky for the patient than would have been a complete suprapubic enucleation. The judgment of the operator is supreme in do-

ing a resection, and the life of the patient depends entirely on this judgment; and I sometimes wonder if many urologists are not more willing to take a chance under conditions wherein their mistakes will be hidden inside the patient than they would be if the wound were out in the open where every one could see it.

Assuming that the instrument can be inserted into the bladder and that vision is good, I see no contraindication to doing a resection in any case where an operation is contemplated. If the obstruction is almost totally in the median lobe, there is no difficulty in removing it with a resectoscope in any case. If the obstruction is both in the median lobe and in the lateral lobes, the operation should begin with the removal of one lateral lobe, preferably beginning as far anteriorly as possible and resecting toward the midline. Not only should the surface facing the interior of the bladder be resected but the removal should be carried as far distally as the verumontanum, then the opposite lateral lobe should be removed in exactly the same manner, and finally the median obstruction should be attacked. The reason for this order of procedure is that there will be less hemorrhage if the arteries which come in from the lateral side are cut off in the beginning. Also it is much easier to locate the median lobe and see its relation to the ureters and trigonal muscles after the large masses of the lateral lobes have been removed. In the beginning of my work I did not know that it was necessary to come so far out in the prostatic urethra as I now routinely do, but by virtue of the fact that the lateral lobe continued to obstruct the prostatic urethra after I thought I had done a good operation at the bladder neck, I was many times forced to go back and do a second resection.

When all visible obstructions have been removed so that there is apparently a good open bladder neck, I feel that it is wise to quit. Many men in the profession today write about the large amount of tissue which they remove and some go as far as to say that they can peel out practically all of the prostatic tissue down to the encircling bladder muscle and capsule and are perfectly able to distinguish between the two by vision. I would not dispute such men but would simply say that they are unusually skillful and that the majority of men cannot do this. It seems to me, therefore, that the more safe and conservative method is to stop when one has relieved the trouble for which the patient came in, rather than to run the risk of digging out far enough that one goes through the wall of the bladder or produces a hemorrhage of uncontrollable nature. It has been my habit for some time to remove tissue until I think enough has been taken out, then to fill the bladder with water, withdraw the cystoscope, and press down on the dome of the bladder. If a good stream comes out of the urethra, I feel I have done enough. If not, I put the instrument back and continue resecting until the stream does come freely. When this happens, I quit again and the only cases in which I have had trouble during recent months have been those where I continued to remove tissue after a good stream came through.

Post-operative care of resection cases has the advantage that it is ordinarily not complicated by shock or pain. On the other hand, it has the disadvantage of calling for more care and attention regarding hemorrhage. Even though the majority of my patients reach the bed with a pulse rate of not more than 100, I routinely give them 1000 ccs of 5 per cent glucose intravenously and allow them nothing but hot water by mouth during the first twenty-four hours in order to prevent intestinal distention. Pain is a negligible factor and hypodermics are given as needed. Many patients come through without a single hypodermic. Control of hemorrhage has been no problem since the Foley bag was introduced. I always put one in immediately after the operation and leave it. The only trouble I have had has been that it occasionally becomes plugged with mucous or blood clots and has to be opened by irrigation. I have found that a simple, ordinary metal ear syringe is the best clot dislodger. By means of it, I can apply a powerful suction which will draw any ordinary clot through the catheter. I think it is far better than the elaborate evacuators which are used by some men. Some resectionists say to wash the catheter frequently to keep it clear of clots, and others say do not irrigate. It seems to me that the sensible thing to do is to wash only when the catheter is stopped up. If the patient can possibly afford it, a trained nurse for the first twenty-four hours is one of the best investments he can make because she can watch the catheter and general condition in a way in which no floor nurse ever does.

Summarizing, I believe that resection has been generally advertised to be simpler and safer than it actually is. The operation has the disadvantage that it is difficult to learn except by doing it and requires considerable experience and equipment in order to make the operator competent and able to take care of such emergencies as may arise. I think that none except those who are well trained in the use of a cystoscope should ever undertake it and that even these should be well trained in general surgery. Given an ex-

perienced, competent operator with sufficient equipment, I believe that eighty to ninety per cent of cases can be easily handled by resection and that the remaining ten or fifteen per cent can be handled by resection plus suprapubic drainage. I think it is a nice question of judgment as to when enough tissue has been removed and agree that the operator should remove all that he can safely take. The simplest way to find out when enough has been removed is to fill the bladder with water, remove the instrument, and press gently down on the dome of the bladder. If sufficient tissue has been removed, a good stream will be forced out through the urethra. Post-operative care should be exactly like that of an abdominal operation with the addition of watching for hemorrhage and seeing that the bladder drains properly.

DISCUSSION

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Advantages and Disadvantages of Prostatic Resection

The transurethral surgical approach for the relief of prostatism has been a controversial subject for the past ten years. Despite much adverse criticism, nevertheless, in competent hands it has been firmly established as the method of choice for the treatment of all but a small per cent of patients who suffer from this ailment. However, the profession has begun to realize it is a procedure demanding the highest developed endoscopic skill on the part of the operator, and unless the surgeon be so equipped through much training and experience, the results in general will be poor. I know of no branch of surgery, unless it is plastic surgery, that reflects more clearly the skill and ability of the operator than prostatic resection.

The absolute requisite to a successful resection is the thorough removal of all obstructing tissue in the bladder neck. This must be excised cleanly and quickly with a minimum of coagulation. To remove less than the quantity required to provide a free passageway for the urinary stream is fraught with danger, for then we have a condition that favors unsatisfactory end results and serious complications, namely, traumatized devitalized tissue complicated by urinary tract obstruction.

In the great majority of instances, an operative period of an hour will provide ample time for the removal of approximately thirty grams of tissue. Not infrequently seventy or eighty grams of tissue will be found necessary for removal, and in these I believe a repetition of the procedure rather than a single prolonged session will be found more advisable. In an occasional instance where the obstruction is of such size as to require resection of more than eighty or 100 grams of the growth the choice of surgical treatment should be by an open operation.

May I again emphasize that transurethral surgery in the hands of the experienced surgeon is the most desirable surgical method for the treatment of the obstructing prostate. When experience and skill is lacking it is a procedure in which the results that follow are in general most unsatisfactory and not infrequently disastrous.

Artificial Pneumothorax in Non-Tuberculous Disease of the Lung*

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The deliberate induction of pneumothorax, as brought out by Forlainini and others many years ago, and popularized by Murphy in this country, was primarily a therapeutic measure in pulmonary tuberculosis. Rest for the affected lobes was obtained, and over the years, particularly since 1920, this procedure has become a standard method of treatment of tuberculous infections of the lung. Bilateral partial collapse has been used, and in properly selected patients fairly satisfactory results have been obtained. The disadvantages of this procedure are, of course, many, but in capable hands and properly selected patients, the benefits outweigh them.

Although apparently simple, pneumothorax is rather a heroic procedure. The displacement of the lobes, the mediastinal shifting, the alteration in vital capacity, the

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disturbance of cardiac function, not to mention the rather vague "pleural shock" join to produce physiological changes, not all of which are desirable. The lung, however, can be manipulated to a certain degree, and observations on this fact are presented.

The writer and associates undertook several years ago to determine the value of pneumothorax in lobar pneumonia. Some work was being done in other centers, and their results were carefully studied. We could not convince ourselves that the mere lessening of the space occupied by a lobe changed conditions sufficiently enough to alter the prognosis. It is true that although affected portions of the lung show a degree of collapse different than the normal and that the blood supply through them is probably diminished, with proportionally lessened absorption of toxic products, we must bear in mind constantly, in the therapy of lobar pneumonia, that it is a systemic disease, and that death from it results from a vasomotor inertia, rather than from, except in rare instances, actual pulmonary insufficiency.

An outstanding symptom in the first few days of this disease is pain in the chest, of pleural origin. This can be controlled by opiates in most cases. Given in adequate doses the respiratory rate diminishes in both rate and depth, tending to accentuate the existing anoxemia and cyanosis. It was found by us that induction of artificial pneumothorax in a satisfactory number of cases separated the visceral and parietal pleural layers, relieving the constant friction and producing gratifying comfort to the patient. It was not necessary to maintain this very partial collapse for more than forty-eight hours, as the pain frequently disappears by that time. In twenty-four cases, all proven by either radiological or unmistakable physical signs, pain was totally, or largely relieved.

The technique used is essentially the same as the induction for pulmonary tuberculosis. The patient lies on the side opposite to the one treated, with a pillow under the ribs to render the upper side more convex, thus widening the interspaces, and the arm moved so that both it and the scapula are away from the puncture site. The skin is swabbed with any convenient antiseptic, and an intradermal wheal raised with procaine. The small needle is carried through to the subcutaneous tissues. We have always wondered if attempts should be made to anesthetize the pleura, especially in the first induction. It is easy to carry an anesthetic into lung substance, and when one uses the pneumothorax needle, it is sometimes helpful, even at the cost of a momentary pain to the patient, to know more definitely that the parietal pleura has been reached.

The needle, after finding the pleural space, is attached to the apparatus—we find the Davidson machine very satisfactory — and manometer readings obtained. These will differ from the quiet variations seen in tuberculosis refills. Pressure is frequently highly positive due to the labored and grunting respirations seen.

The first fill should not exceed 300 cc. This is scarcely discernible on fluoroscopic examination, but it usually causes enough separation of the layers to provide relief from pain, and easier respiration is seen almost at once. Refills are determined by the patient's own sensation of pain. We have seen one instillation of air suffice, and were obliged, in another individual to repeat in ten hours.

Four of twenty-four patients so treated succumbed; a mortality of sixteen per cent. The general mortality that year, on the same service, was twenty-eight per cent. No claim, however, is made that the pneumothorax was a factor in the smaller mortality; the series is too small to justify conclusions of that type. We do not feel that the pneumothorax was a contributory cause in three of the deaths. In the fourth, it probably hastened or caused exitus in an individual who was quite toxic when brought in, suffering from a middle lobe consolidation and very severe respiratory pain over the lower anterior chest. A few hours after his fill, engorgement of the neck veins appeared, signs of vena caval obstruction were seen, and death followed. Necropsy did not reveal the precise cause of the venous engorgement. The pathologist was of the opinion that the heart was not at fault, but that the middle lobe, in withdrawing from the chest wall, pushed its non resilient medial surface against the right chambers of the heart, causing interference with venous return. This was a conjecture, as these findings were not demonstrable after death. It is difficult to escape the feeling that pneumothorax had something to do with it.

No other untoward results were encountered. Theoretically effusion should appear more readily. This did not occur with any magnitude in the treated cases. We believe that practically every patient with lobar pneumonia will have a small pleural effusion, most of which do not become purulent. Empyema developed in one of our cases, which was successfully treated by aspiration and air replacement.

Although sulfapyridine and therapy with type-specific sera have made radical changes in the handling of lobar pneumonia, it is felt that in properly selected patients, who are distressed by severe pain in the early stages, pneumothorax has occasional value in treatment.

Production of pneumothorax in the treatment of effusion and empyema has been debated at great length. In any procedure of aspiration of the pleural space, a variable quantity of air inadvertently enters, unless the system is a closed one in its entirety. In withdrawing large quantities of fluid, it seems desirable to observe intrapleural pressure with a manometer and to compensate for wide changes with air. Any user of pneumothorax is aware of the fact that a small amount of air can restore pressures caused by much larger quantities of fluid. We feel that, especially in individuals possessing a fragile cardio-vascular system, shock produced by mediastinal shifting can be prevented either by removing small amounts at a time, or by injecting a lesser amount of air which is absorbed slowly and in a way, cushioning the shock. It is, of course, true that enormous quantities of fluid have been withdrawn without unpleasant results — as much as 4000 cc. It is equally true that cardiovascular collapse has followed removal of as little as 300 cc. Thoracentesis may be hazardous in the elderly or debilitated.

In effusions in young individuals, most of which are tuberculous, we have felt that air should be put in, not so much as to compensate for abrupt expansion, but to maintain a space where pneumothorax therapy may be continued should it be found desirable, when in a few days a more accurate diagnosis of tuberculosis could be made. Obliteration of pleural space by adhesions takes a surprisingly short time to develop, especially in the presence of effusion; this may make a great deal of difference in the patient's course. It is usually the fact, however, that parechymatous involvement has not developed when the first effusions appear.

The use of the so-called diagnostic pneumothorax, when radiographic contrast or differentiation is desired undoubtedly has a place in the early diagnosis of lung tumors, which are apparently increasing in frequency. A lung tumor offering few changes taken in the conventional manner may become very conspicuous after partial collapse is induced, the changes again being based on the difference in elasticity of normal and neoplastic tissue. The writer has not had sufficient experience with it to venture an opinion.

In certain acute lung abscesses, we believe, pneumothorax offers a most valuable assistance. By *no means* are all abscesses suitable. One must wait until good localization has taken place, and until a fairly developed wall appears. The location is likewise important. A hilar position offers, both theoretically and actually, a more favorable result, as adequate bronchial communication is more probable. Emptying of the abscess cavity and approximation of the walls are the desiderata. If communication with a bronchus is demonstrable, either with lipiodol, or the observation that pus is being expectorated, and the above condition of localization met, it is felt that cautious collapse can be begun without delay. Insertion of the needel should be made away from the site of the abscess, to avoid accidental penetration of the abscess, if peripheral, with subsequent pleural contamination. Careful record of the temperature, pulse, and quantity of sputum should be kept. The collapse should be conducted slowly, for several reasons other than those of obvious caution. Fresh adhesions near the abscess may be torn, resulting in superimposed spontaneous pneumothorax. The degree of collapse must be watched as it is theoretically possible to defeat one's own purpose by occluding the means of egress of the pus. We have not had this happen as yet, but nevertheless maintain careful watch for it.

It has not been necessary to either achieve a high collapse, or maintain it for a long time. A twenty-five per cent compression has been the most used, and six weeks the longest time maintained. Negative pressure is conserved. Question may be raised as to the actual efficacy of this method, as it is well known that acute abscesses may heal spontaneously. It is likewise freely admitted that I have no control series. The rapid disappearance of fever, sweats, and leukocytosis, with the decline in production of sputum have been so striking, after an illness of some weeks, that I have been reluctant to withhold this means of therapy to establish a non-treated series. Excellent and permanent results have been secured in six consecutive cases, five of which were treated by collapse; the other had such a small post pneumonic abscess, with fluid level, and the constitutional symptoms and signs so slight that it seemed she would recover without assistance, which she did.

We have made no attempt to investigate the presence of residual cavities, as these individuals are, so far as the lungs are concerned, without complaint.

Pneumothorax treatment of bronchiectasis and bronchiectatic abscesses, is, as far as personal experience is concerned, a dismal failure. Diaphragmatic adhesions are usually so dense that no collapse results; indeed, if air can be put in at all. The individuals are usually invalids of long standing, with well developed stagnation in the lower bronchial tree and the lesions are frequently bilateral. If a collapse could be secured, as it no doubt has been by others, it is possible that some benefit might result. We have not had that good fortune. Interruption of the

phrenic nerve has not given results sufficiently good to repeat the procedure in others.

SUMMARY

1. Artificial pneumothorax is valuable, in selected cases, in providing pain relief in lobar pneumonia or acute pleuritis.
2. It may be used in effusions, to prevent mediastinal shock.
3. Excellent results have been obtained in acute lung abscesses, using stipulated precautions.
4. Diagnostic pneumothorax may be used in questionable parenchymal shadows.
5. It is of little or no value in bronchiectasis.

The General Practitioner's Practice With Macrocytic Anemia*

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Physicians probably can best hide their lights under a basket by giving pink pills to pale people. That we are doing this very thing is evident by the fact that there is an ever increasing number of shotgun remedies for anemia by the various pharmaceutical houses. We must be contributing to this very lucrative business, or so many preparations would not be presented on blotters as the panacea for the pale.

These remedies do not only contain liver, iron, copper, manganese, stomach tissue, vitamins, but nicotinic acid. I am sure if we do not consider ourselves as detectives searching for the cause of anemia some company will have to add thyroid, quinine, antiacids, anthelminetics, etc., to the above combinations. Also in the additions one might include vitamin K with bile salts for postoperative bleeding and anemias of jaundiced patients.[1] Yes, in the words of Dr. Russell Haden it would indeed be "a dash of this and a dash of that."

Pale people are often considered and treated as a disease rather than a symptom. In the newer and better classification of macrocytic and microcytic anemia, we can easily lose sight of the practical reminder of the older classes of primary and secondary. In general practice among pale country people, the larger majority of cases of anemia are truly secondary to a cause which should be discovered. Lest I be accused of casting stones, let me say that my house is not glass, nor is it a castle on the hill. The following cases are glaring examples of my own mistakes.

Case 1. August, 1936. W. H., 76 year old white male, was seen complaining of weakness, fatiguability, indigestion, gas, numbness, fatigability, indigestion, gas, numb- This Oklahoma pioneer's history was essentially negative, except that the duration of complaints was approximately about a year and had improved at two different times without treatment. Physical examination was essentially negative except for some defective teeth, heart rate, which was too rapid, a generalized arteriosclerosis, underweight, and pale. The blood count revealed a moderate macrocytic anemia. With the typical symptoms of anemia, I considered that his trouble was pernicious in type and started him on liver extract therapy. After a few doses he improved markedly and I did not hear from him for about four or five months, at which time he returned complaining of the same symptoms, only to a more marked degree. In the course of a reexamination he asked the cause of anemia and I made the statement that anemia was due to: 1. Blood loss; 2. Something wrong with the formation of the blood cells; and, 3. Something destroying the blood cells faster than they are made: I then obtained the history that at various times he had bright blood in the stools which had occurred occasionally, but during the last three months had happened several times. A proctoscopic examination revealed an annular carcinoma of the sigmoid. The rest of the story you know.

Case 2. October, 1938. S. B., age 12, complaining of weakness, one year's duration. Because of this weakness she refuses to ride her bicycle to school or take gymnasium. The onset of menstruation began three months ago with a rather profuse flow.

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The periods since then have been characterized by menorrhagia and metarrhagia. History is essentially negative except that the mother states the child would much rather sit around with a book than play with other children. Grades in school indicate a very intelligent child. Examination is essentially negative except that she is underdeveloped for a twelve-year-old child and has a clinical anemia. Red blood count was 3,500,000 with hemoglobin of 65 per cent Sahli. The anemia was microcytic. Thinking that the majority of this child's trouble was due to the loss of blood from her menstrual disturbance, associated with puberty, she was placed on iron and small doses of Fowler's solution. This patient returned six months later with practically no improvement except that her menstrual periods had been more normal in time, duration, and amount. Reexamination revealed a very dry skin of the hands, forearms, and elbows, with some puffiness of the hands and eyelids, and the abdomen showed a characteristic pot-belly. The basal metabolism test was minus 20. The patient has taken thyroid ever since with a very definite improvement in menstruation, growth, appearance of skin, contour of face, and abdomen. The last blood count made in December, 1939, was 4,500,000 red blood cells with 90 per cent hemoglobin, Sahli method, and the BMR was minus 5.

The proper treatment for the case should have been a more definite blood workout with a better history of the gastro-intestinal symtoms and a proctoscopic examination in the beginning. The stopping of the hemorrhage is of course very good treatment in any anemia. In fact, any true case of pernicious anemia which does not respond to what you consider adequate treatment should be closely investigated for actual blood loss, whether it is from the nose, gastro-intestinal tract or urinary tract. In the second case an adequate diagnosis was not made at the onset or the patient would have improved from the start.

These two cases, which show glaring mistakes, should point out that treatment for anemia should not be instituted until an accurate diagnosis has been made. In a country type of practice if we give the patient something to relieve the anemia symptoms it may be some time before we get him back into the office to complete a more accurate diagnosis. If he is not given relief from the start he is more apt to return so that we can find out what will give him more adequate relief.

In general practice one naturally has various types of cardiac patients who have an associated anemia—many angina pains and other types of vascular pain are on the basis of anemia and can be relieved by antianemia treatment. The physiological principle of treating any heart pathology is to see that the muscle receives an adequate supply of oxygen, glucose, and insulin — naturally the only source of oxygen is through the blood. These anemic cardiac individuals are usually improved by the treatment of the anemia provided there is no stasis in the lungs.

A great majority of the anemias encountered in general practice fall in either the microcytic or the macrocytic group.[2] "A microcytic anemia is one in which there is an increase in the number of red blood cells having an average diameter which is less than normal and a mean corpuscular volume below 96 cubic microns. The color index is characteristically less than one, which indicates that the reduction of the hemoglobin is relatively greater than the diminution of the red blood cells. This condition is more frequently associated with the reduction of the iron reserves of the body which results in an inability to synthesize hemoglobin in normal amounts. Frequently there is a favorable therapeutical response to the administration of iron, but improvement rarely follows antipernicious anemia therapy."

"A macrocytic anemia may be defined as one in which there is an increase in the number of red blood cells of the circulating blood having a diameter greater than 7.5 microns and a mean corpuscular volume exceeding 96 cubic microns. Such an anemia has a color index which is usually one or higher. It is generally considered to be due to defective blood formation and is frequently controlled by antipernicious anemia medication, but is ordinarily not benefited by iron therapy."

Definite clinical and experimental proof now indicate that the erythrocytes mature in the bone marrow and are released to the circulating blood, under the control of a regulatory system which functions as follows: "An unknown constituent of the diet which is called the extrinsic factor reacts with the intrinsic factor, probably an enzyme which is normally present in the gastric secretion, to form a substance which controls the rate of development of the red blood cells in the bone marrow. Because these cells are not released under normal conditions until they have fully matured, any disturbance which retards the maturation will diminish the number which is supplied to the peripheral blood, and a macrocytic anemia due to diminished blood formation will develop. This variety of anemia, which is sometimes observed in sprue, is thought to be due to the lack of an extrinsic factor. The fact that some macrocytic anemias show a therapeutic response to the administration of yeast suggests that a dietary deficiency has an etio-

logic significance. It is now recognized that true pernicious anemia is due to an absence or a diminution of the intrinsic factor. Even when the extrinsic and intrinsic factors are available, a macrocytic anemia may develop as a result of other disturbances which prevent the erythrocyte maturing substance from performing its function. For example, there may be a failure in its absorption due to intestinal anastomoses or stricture. Finally, a macrocytic anemia may be due to an inability of the body to store the substance in the liver and release it in an orderly fashion as needed. This is thought to occur in extensive disease of the liver, such as cirrhosis.

The lesions of the gastrointestinal tract which one may expect to find associated with macrocytic anemia are partial or total gastrectomy, infiltrating carcinoma of the stomach, and various intestinal strictures and intestinal anastomoses. Any extensive involvement of the liver such as cirrhosis or acute hepatitis also may give macrocytic anemia.

The severe anemias of pregnancy may resemble pernicious anemia but differ from it because the patient usually recovers. Castle and Straus[3] have studied carefully the number of cases of primary anemia in pregnant women and conclude that there is much to show that the mechanism of production is very similar to true pernicious anemia. That is, the intrinsic factor of blood formation is lacking in the gastric juice. They feel that this factor returns permanently following the termination of pregnancy, thus differing from true pernicious anemia. This bears out the clinical observation of Osler who stated that "the main difference from real pernicious anemia lay in complete recovery." Of course the majority of the anemias of pregnancy are microcytic in type due to iron deficiency, but our status in anemias of pregnancy should be to concern ourselves with the type of anemia as well as check the blood pressure and urine, weight, etc., in our routine check-up. Every pregnancy should have a blood check-up at her first visit, seventh month, and just before term.

The macrocytic anemias in tape worm infestation can only be differentiated from pernicious anemia by finding the ova or segments in the stools.[4] Other conditions sometimes which must be differentiated from pernicious anemia are: colon and pancreatic malignancies, myxodema, nephritis, or the leukemias.

The importance in the treatment of macrocytic anemia is to recognize the etiological factor, because macrocytic anemia in many instances yields to antipernicious treatment, especially to the parental administration of liver extract which eliminates all question of absorption of the gastrointestinal tract.[5] If the patient is not considered as a whole and only the blood picture is taken as a basis of treatment many early cases of myxodema, gastric carcinoma, liver disease, etc., will be clouded by the response to antipernicious treatment. If the macrocytic anemia is a true pernicious anemia the response to liver extract, of course, is very gratifying. It is rather difficult in true pernicious anemia to state precisely the optimum amount of liver extract which is required for each individual patient because various conditions, such as senility, infection, and other unknown factors may require modification in the dosage.

The most practical method to follow is to use the product which is prepared by reputable pharmaceutical firms in dosage recommended by them depending upon the blood as the one criteria to the response of treatment. Because if the subjective symptoms in pernicious anemia are used as the criteria for the amount of liver extract to use, a moderate degree of anemia may persist in an asymptomatic patient. In following an asymptomatic patient cord changes may develop under our nose. Therefore, the blood level must be kept at 5,000,000 RBC's per cubic millimeter. It is generally thought that in patients with pernicious anemia, central nervous system symptoms may appear, or, if present, may progress unless red blood cells are maintained at a high level of normal.

Haden[6] has stated that if deficiencies were detected early and treated adequately it is probable that the central nervous system would never be involved. However, in his experience, 85 per cent of the patients in whom pernicious anemia was diagnosed for the first time already had evidence of neurological involvement. Young physicians often lack the finesse of older man and frequently patients discontinue treatment after they show marked improvement. This is a loss in the battle because the most essential part in the treatment of pernicious anemia is for the patient to really understand that throughout the remainder of his life he must have adequate treatment.[7]

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EDITORIALS

GROUP HOSPITAL SERVICE

This program was inaugurated in April of this year under the leadership of the Oklahoma State Medical Association and the Oklahoma State Hospital Association. The members of these associations had worked long and diligently in an effort to bring to the people of Oklahoma the best possible plan.

The employees of eighty organizations have accepted this service, through which membership has been extended to over 7,000 persons. The plan has paid hospital bills for forty of its members. The shortest period of hospitalization was one day and the longest was twenty-two days.

The program is gradually being extended to the various communities of the state, in keeping with the objective of a state-wide plan. The administrative staff is being aided immeasurably by the enthusiastic support of local medical societies and civic bodies. Community consciousness is developing to a point of civic proprietorship. There are now a total of approximately twenty hospitals cooperating in the program and it is anticipated that twenty-five more will be added within the next few weeks.

Membership in the plan is available only to employed or organized groups, but such persons, for a small additional monthly cost, may include their husband or wife, also all unmarried children under the age of twenty-one years. No medical care is included in the benefits of membership. Services of the physician, physiotherapist, anesthetist, roentgenologist or pathologist are excluded. The plan pays the hospital bill and the patient makes the usual arrangements to remunerate the doctor.

Our Oklahoma Plan was founded on principles evolved through a decade of experience. Those experiences and accomplishments in protection to 5,000,000 people give evidence of sound practices and the ability to meet social and contractual obligations to members. The civic leadership of the Trustees and the cooperation of hospitals and medical societies are serving to firmly establish this new social conception as a public service of potential magnitude.

It is the duty of those of our profession to continue our objectives toward the establishment of Group Hospital Service as a preeminent community resource.—N.R.S.

DO YOUR DUTY

It is very fitting that Dr. Henry Turner should head the movement for Medical Preparedness in Oklahoma as he has been elected to head the profession of the State during this year.

The way the A.M.A. has accepted the responsibility of organizing the profession of the nation is an immense task and can only be accomplished by placing the proper man in charge of the work in each state and this we have done.

Dr. Turner can accomplish little or much, just in proportion to the cooperation received from the individual physicians. Less than 50 per cent of the questionnaires sent out to the physicians of this state have been completed and returned. A follow-up card has been sent out from our state headquarters and still there are many who have neglected to meet this patriotic responsibility.

Your representatives in the House of Delegates voted for this plan of medical organization for preparedness and the A.M.A. has accepted the responsibility. It is your duty to your nation as well as to organized medicine to meet this individual responsibility so that you may be properly classified and prepared to serve in the capacity where you will accomplish the greatest good.

It is, I am sure, not lack of patriotism but negligence that has caused this delay. Please see to it that your questionnaire is immediately returned.

DR. CHARLES ROBINSON HUME

One of our most loved characters in Oklahoma Medicine, Dr. Charles Robinson Hume, has passed from our Association.

Many honors were bestowed upon this grand and good man, but the one he prized most highly was the Presidency of the Oklahoma State Medical Association, in which capacity he served in 1914-15. As the profession honored Dr. Hume, he in turn honored the profession while he served as an official. During this time there was harmony in the association led by this man who played no tricks but was fair in his judgment and held the good of organized medicine to be the goal of his administration.

Those of us who knew him through the many years will miss his association and we now honor him for a long life well spent in the service of mankind in general and the medical profession in particular.

• THE PRESIDENT'S PAGE •



As of September 10, four hundred and ninety members of the Oklahoma State Medical Association had not returned an answer to the recent communication from the Oklahoma State Medical Preparedness Committee as to whether or not they had answered the questionnaire of the American Medical Association on Medical Preparedness.

The communication from the O. S. M. A. was marked in red ink, "Important", and a self-addressed postal card, postage paid, and with only a check mark necessary for an answer, was enclosed and available for the member's use. Four questions were asked: "Questionnaire not received, please mail me one;" "Questionnaire mislaid, please mail me another;" "I have answered and mailed questionnaire;" and "I am writing committee for further information." Can it be that there are 490 members of the Oklahoma State Medical Association who do not believe in Medical Preparedness? The letter and the questionnaire state that the information is confidential. Answering the questionnaire DOES NOT enlist one in the military forces of the United States.

A natural question asked by many has been, "Just what is the reason for the questionnaire?" The answer to this question is that war today is total. Curative medicine and public health for the civilian population, together with medical education, will be as important as medicine and surgery in military maneuvers. The results of the survey will be used to determine the extent to which American Medicine can answer the demand placed upon it in all fields.

Every doctor must remember that this is not a regimentation measure, but a democratic and voluntary one. While the program may not be perfect in every detail or agreeable to everyone in many of its inquiries, it is nevertheless the effort of a free and progressive profession striving to do of its own accord that which in many another country would be done by force.

Henry H. Turner

President.



ASSOCIATION ACTIVITIES

State Committee on Medical Preparedness Established

Further organization of the state's medical preparedness activities in cooperation with the medical preparedness program of the American Medical Association has been effected during the past month with the establishment of an Oklahoma State Medical Preparedness Committee and the appointment of committee members to represent their respective localities over the state.

Named by Dr. Heury H. Turner, Chairman of the committee, to serve as Vice-Chairman was Dr. L. S. Willour, McAlester. Dr. Turner's appointments of physicians to represent the couucilor districts in providing detailed correlation of medical preparedness work over the state are as follows:

Conncilor district one, Dr. Johu L. Day, Supply; district two, Dr. J. M. Bonham, Hobart; district three, Dr. J. M. Watson, Enid; district four, Dr. R. M. Howard, Oklahoma City; district five, Dr. James L. Patterson, Duncan; district six, Dr. W. Albert Cook, Tnlsa; district seven, Dr. Robert M. Anderson, Shawnee; district eight, Dr. F. L. Wormington, Miami; district niue, Dr. J. M. Harris, Wilburton; district ten, Dr. John A. Haynie, Durant. To round out the state committee, three physicians have accepted appointment to the committee in an advisory capacity. They are: Dr. G. F. Mathews, in the field of public health; Dr. Robert U. Patterson, field of medical education; and Dr. Louis H. Ritzhaupt, field of army requirements.

Iu an effort to make Oklahoma's part in the national program as complete and efficient as possible, presidents of the various county medical societies were requested by Dr. Turner to appoint a member of their societies to hanule preparedness activities iu their respective counties. At press time, all but seventeen of these appointments had been received in the Executive Offices. The conuty chairmen who have been appointed are:

Atoka-Coal: J. S. Fulton, Atoka; Bryan: R. E. Sawyer, Durant; Caddo: Odis A. Cook, Anadarko; Canadian: J. T. Phelps, El Reno; Carter: F. W. Boadway, Ardmore; Cherokee; J. S. Allison, Tahlequah; Choctaw: E. A. Johusou, Hugo; Cleveland: W. T. Mayfield, Norman.

Comauche: Fred W. Hammond, Lawton; Cotton: M. A. Jones, Walters; Creek: G. C. Croston, Sapulpa; Garfield: John R. Walker, Enid; Garvin: John R. Callaway, Panls Valley; Grady: L. E. Woods, Chickasha; Greer: J. B. Hollis, Mangum; Harmon: S. W. Hopkins, Hollis; Hughes: A. L. Davenport, Holdenville.

Jackson: E. S. Crow, Olustee; Jefferson: L. L. Wade, Ryan; Kay: L. H. Becker, Blackwell; Lincoln: John S. Rollins, Prague; McClain: W. C. McCurdy, Purcell; McCurtain: W. B. McCaskill, Idabel; McIntosh: D. E. Little Eufaula; Marshall: J. L. Holland, Madill; Murray: Paul V. Annadown, Snlphur; Muskogee: H. T. Ballantine, Muskogee.

Noble: T. F. Renfrow, Billings; Okfuskee: A. S. Melton, Okemah; Oklahoma: Horace Reed, Oklahoma City; Ottawa: F. L. Wormington, Miami; Pawnee: R. E. Jones, Pawnee; Payne: R. E. Waggoner, Stillwater; Pittsburg: R. K. Pemberton, McAlester; Pontotoc: M. M. Webster, Ada; Pushmataha: D. W. Connally, Antlers.

Stephens: W. S. Ivy, Duncan; Texas: R. B. Hayes, Guymon; Tulsa: James L. Miner, Tulsa; Wagoner: J. H. Plunkett, Wagoner; Washington-Nowata: J. V. Athey, Bartlesville; Washita: A. H. Bungardt, Cordell; Woods: O. E. Templin, Alva; Woodward: John L. Day, Supplv.

Record Attendance Expected At Clinical Society Conference

Marked by the appearance of seventeen guest lecturers, all outstanding physicians in their respective fields, the fall clinical conference of the Oklahoma City Clinical Society is expected to attract a record attendance for its tenth annual program opening iu Oklahoma City October 28. The conference, which yearly is gaining widespread national attention will continne through October 31, with a full schedule each day of general assemblies, post graduate courses, and entertainment features.

The appearence of Dr. Nathan B. Van Etten, President of the American Medical Association, will be a highlight of the four-day confereuce. Dr. Van Etten will be feted by the Oklahoma Conuty Medical Association at a banquet on Monday night, October 28, when he will address members of the county society and their guests, members of the Oklahoma City Clinical Society. Other interesting guests on the roster of lecturers will be Dr. Fraucis M. Pottenger, tuberculosis specialist of Monrovia, Calif., and Dr. Ernest Sachs, nenrological surgeon of St. Louis, Mo., both of whom appeared as guest speakers during the course of the first annual conference of the cliuical society in 1930.

While attendance records last year soared to new heights, members this year are making arrangements for the largest in the ten-year history of the conference —this, in view of the pre-conference euthusiasm already being aired. As at the 1939 session, associate members will be here from all parts of Oklahoma, Kansas, New Mexico, Colorado, Missouri, Arkansas, Louisiana, and from as far distaut localities as Wyoming, California, Arizoua, Philadelphia, aud Rochester, N. Y.

Tuesday night, October 29, will be featured by a dinner and dance at the Chamber of Commerce, with visiting doctors and their wives as guests. The annual popular and well-known stag party has been scheduled for Wednesday night, October 30, at the Oklahoma Club.

Wives accompanying their husbands to the conference will not lack for entertainment, as a daily round of entertainment features is being planned by the Women's Anxiliary of the county medical association.

All sessions and commercial exhibits will be at the Biltmore Hotel. A complete list of guest speakers will be found on the cover of The Journal, aud additional information may be learned by corresponding with the clinical society secretary, 512 Medical Arts Building, Oklahoma City.

Two State Doctors Certified By Internal Medicine Board

Two Oklahoma physicians have been certified as specialists in internal medicine by the American Board of Internal Medicine following the Board's examiuations in April and June, according to a communication from Dr. William A. Werrell, Assistant Secretary-Treasurer, Madison, Wis.

Notices of certificates were issued to Dr. Bert F. Keltz of Oklahoma City, who was certified in April, and to Dr. W. Turner Bynum of Chickasha, certified June 11. Dr. Bynum is the youngest doctor in the United States to receive the designation by the Board.

Pediatrics Course Opens This Month in Fourth Circuit

Announcement has just been made for opening the Post Graduate Pediatrics course to physicians of the fourth Pediatrics circuit. The counties to be covered by this fourth circuit will be Kay, Osage, Noble, Pawnee, Payne, and Creek. The tentative teaching centers will be: In Kay County, Ponca City, Blackwell, and Tonkawa; Pawhuska; Pawnee; in Payne County, Stillwater and Cushing; and in Creek County, Bristow and Sapulpa.

Instruction will begin the week of September 23, and continue for ten weeks. Dr. James G. Hughes of Memphis, Tennessee, opens his course with the first lecture in a discussion of the upper respiratory tract infections, and includes in his discussions rhinitis, pharyngitis, otitis media, acute cervical lymphadenitis, retropharyngeal abscess, peritonsillar abscess, acute sinusitis. He discusses thoroughly the latest developments in the clinical use of sulfanilamide, sulfapyridine, sulfathiazol and sulfamethylthiazol, with the dosages indicated for children, their toxic reactions, and mauagement of all such cases.

Physicians of southeastern and east ceutral Oklahoma through the warm spring and summer months manifested unusual interest in this course in Pediatrics by Doctor Hughes, as indicated by the high percentage of attendance in all groups. The free and private consultation privilege has been utilized by physicians registered in the course in all sections of the present and past teaching circuits. In the present circuit, the reports show a total of 205 consultations during the first six weeks of instruction.

The first lecture should be of interest to physicians in view of the coming fall and winter months with the increasing respiratory problems among children.

This course is sponsored by the Oklahoma State Medical Association, with the fiuancial assistance of the Commonwealth Fund of New York, and the Oklahoma State Health Department. It is open to all ethical and legal medical practitioners.

The Oklahoma report and exhibit in the Scientific Section of the American Medical Association in New York in June attracted widespread attention of delegates and medical association officials from many states.

Dr. James Smith of Ardmore has been appointed secretary-treasurer of the Carter County Medical Society to fill the unexpired term of Dr. W. Doak Blassingame, Dr. J. Hoyle Carlock, president of the society, has anuounced. Dr. Blassingame has moved to Denison, Texas, to continue his practice.

Medical Licensure Report for State Is Given

Forty-seveu candidates, the number examined, passed the written examinatiou for medical licensure in Oklahoma City June 5-6, it has been announced by Dr. James D. Osborn, Jr., Secretary of the Oklahoma State Board of Medical Examiners.

Twenty-four physicians were licensed by reciprocity, and two physicians were licensed by endorsement.

Schools represented by those licensed by reciprocity, the year of graduation of the candidate, and the state with whom reciprocity is made are, in order, as follows:

University of Arkansas School of Medicine, (1937, 2), (1939), Arkansas; Northwestern University Medical School, (1932), Kausas; Rush Medical College, (1936), Illinois; Tulane University of Louisiana School of Medicine, (1932) Mississippi, (1938) Louisiana; Washington University School of Medicine, (1939) Missouri; University of Nebraska College of Medicine, (1928), Tenuessee; Duke University of Medicine, (1936), California; Western Reserve University School of Medicine, (1935), Ohio; University of Oklahoma School of Medicine, (1937), Colorado.

Hahnemann Med. College and Hospital of Philadelphia, (1937), Pennsylvania; Jefferson Medical College of Philadelphia, (1915), Virginia; University of Pennsylvania School of Mediciue, (1931), Mississippi; Meharry Medical College, (1938), (1939) Tennessee; Univ. of Tennessee College of Medicine (1927), (1938), Tennessee; Vanderbilt University School of Medicine, (1938), Tennessee; Baylor University College of Medicine, (1937), Texas; University of Wisconsin Medical School, (1936), Wisconsin; University of Westeru Ontario Medical School, (1936), (1938), North Dakota.

The two candidates licensed by endorsement, both carrying the endorsement of the National Board of Medical Examiners, represented the University of Minnesota Medical School (1934), and the University of Nebraska College of Medicine (1928) respectively.

Location Available at Ada

Mr. Lowry Harrell, formerly a member of the Board of Regents of the University of Oklahoma, is authority for the statement that there is a vacancy for a Resident in the Valley View Hospital at Ada, Pontotoc County.

The Valley View Hospital has accommodations for about 75 patients and is a general hospital. The salary is $100 per month plus room, board, laundry, and other necessary expenses. To be eligible, an applicant must have had at least two years of previous hospital experience in an approved institution.

Any physician interested should make a written application for the position to The Commonwealth Fund, 41 East 57th Street, New York City, and also personally contact Mr. Harrell at Ada.

DR. WHITE'S SANITARIUM

NERVOUS AND MENTAL DISORDERS; ALCOHOLISM AND DRUG ADDICTIONS



Wichita Falls, Texas

M. W. CASKEY, Ph.D., M.D.
Medical Director

GUY V. TAYLOR
Business Manager

Modern fire-proof building. All latest methods of diagnosis and treatment.

News From The State Health Department

Oklahoma is getting results from the State Health department's program of education for better health, immunization against communicable diseases and improved sanitation.

A report published this week by the United States Public Health Service shows that the death rate for Oklahoma has decreased during the past year, and the death rate from all but one of the communicable diseases such as typhoid fever and smallpox has also decreased.

Oklahoma's reduction is more significant in view of this quotation from the Public Health Service report: The states reporting a higher death rate in 1940 than in 1939 were all in the south or west.'' The report covers the first three months of 1940, but ''it is believed that the trend of mortality within each state is correctly represented.''

The figures giving the death rate, or number of deaths for each 1,000 population, show the value of the public health work being done by the State Health Department, with the cooperation of the medical profession.

During the 1940 period the total death rate in Oklahoma was 9.2 per 1,000, while for a similar period in 1939 it was 9.5. The infant death rate, including children up to one year of age, was 54 per 1,000 births, while in 1939 the rate was 63, representing a decrease of 14 per cent.

Maternal mortality also showed a significant decrease, from 4.1 per 1,000 to 3.5.

Public health does much of its work with mothers and infants, carrying on a complete program for their safety and proper care.

Significant reductions in the number of deaths from diseases which are classified as preventable are shown in the report. In such diseases the State Health Department, through its local or county health department carries on a program of immunization or protection, education, quarantine and removal of the cause of the illness.

Typhoid fever, which has plagued Oklahoma in past years, showed a decrease of from 2.2 to 1.1 deaths per 100,000 population. This disease, having been reduced by half in a year, based on this study, will soon be brought completely under control.

Measles and scarlet fever, troublesome childhood diseases, were reduced from 6 to .3 and from 1.6 to .5 respectively, these figures representing cases for each 100,000 population.

Pneumonia showed a gratifying decrease, from 118.3 to 97.2 and diarrhea and enteritis in children under two years of age decreased from a rate of 4.1 to 2.6.

Other similar diseases showed decreases in prevalence, while illnesses such as cancer, diabetes, tuberculosis, heart disease and adult diseases showed slight increases.

The lone preventable disease which showed an increase was diphtheria. Oklahoma had 25 deaths from diphtheria during the first quarter of 1940, to earn a rate of 4.3 per 100,000 population, compared with a rate of 3.3 in 1939.

Of the 25 deaths, the significant fact is that 16 were in counties having no full-time local health departments, while only nine were reported in counties where public health's full program is underway.

A study of the diphtheria death rate points conclusively to the value of public health as a means of improving health conditions. The 29 counties having full-time local health departments have over half of the state's population, yet had only nine diphtheria deaths, or 3.09 per 100,000 population.

The remaining counties, with less than half of the state's population, had 16 diphtheria deaths and a rate of 5.53. No full-time, organized health program was in effect to prevent occurrence of the disease in those areas.

Several changes in the administrative staff of the Oklahoma State Health Department have been announced by Dr. G. F. Mathews, Commissioner.

Special courses in public health are being taken by several department officers, making the changes necessary, it was explained.

The dental division has a new, temporary director in Dr. R. F. Erdman. Doctor Erdman joined the department on May 1 as assistant director, after completing a special course in dental public health at the Michigan University School of Public Health. He is a graduate of the Northwestern University Dental School, Chicago.

Doctor Frank P. Bertram, director of this division, has gone to Harvard University for an academic year of study in the School of Public Health, where he will work on his degree of Master of Public Health.

In the Venereal Disease Control department, Dr. Eugene A. Gillis has relieved Dr. Vance F. Morgan as director. Doctor Gillis has been epidemologist with the State Health Department. Doctor Morgan is taking a nine-month course in venereal disease control at the Johns Hopkins University School of Public Health, Baltimore, Maryland.

Dr. John Y. Battenfield has been changed from the Venereal Disease Control division to the post of epidemiologist.

Dr. J. T. Bell has succeeded Dr. Paul J. Collopy as director of the Department of Maternal and Child Health. With the health department four years, Doctor Bell was Director of Cooperative District Number Four, stationed at Woodward, before coming to the state office.

Doctor Collopy resigned to take a position as resident orthopedic surgeon, Children's Hospital, Seattle, Washington. He was with the health department four years, as Director of the Maternal and Child Health Department.

University of Oklahoma School of Medicine

A special department dealing with cardiac diseases in children has been established in the Crippled Children's Hospital of the University of Oklahoma School of Medicine. Eight (8) beds have been reserved in the wards of the hospital for cases of this kind and an Outpatient Clinic is held every Wednesday morning for heart cases.

Last June a special ward with a capacity of twenty (20) beds for the reception of colored children under twelve years of age was open in the Crippled Children's Hospital. Beds for adult colored men and women are reserved in the University Hospital. All colored children, when beds are available, are admitted to the Crippled Children's Hospital.

Dr. Berry Campbell, Assistant Professor of Anatomy, is on leave of absence for one year on a Guggenheim Fellowship. Dr. Russell L. Moseley, formerly of the Neurological Institute of Northwestern University Medical School, Chicago, Illinois, has been appointed Assistant Professor of Anatomy ad interim.

Miss Dorothy Omundson from the University of Washington has been appointed Research Fellow in the Department of Bacteriology.

Mr. Charles B. Broeg from the Oklahoma A. and M. College, Stillwater, has been appointed Research Assistant in the Department of Biochemistry.

NEW BOOKS

NEW AND NONOFFICIAL REMEDIES, a publication of the Council on Pharmacy and Chemistry of the American Medical Association. Pp. 656; Chicago: American Medical Association, 1940.

"New and Nonofficial Remedies" contains listings and descriptions of the articles that stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1 of the year of publication.

The descriptions of accepted articles are based in part on investigations made by, or under the direction of the Council and in part on evidence or information supplied by the manufacturer or his agents. Statements made by those commercially interested are examined critically and admitted only when they are supported by other evidence or when they conform to known facts.

The grouping together of articles having similar composition or actions is continued in this edition, each group being preceded by a general discussion. These general articles have been revised when necessary to bring them up to date.

During the year 1940 descriptions of such other medicinal substances as are accepted by the Council for New and Nonofficial Remedies will be published from time to time in The Journal of the A. M. A., and will be reprinted in the form of supplements, which will be sent to those who purchase this book.

Besides a general index and an index to distributors, sixty-eight pages in the back of the book make up a bibliographical index to proprietary and unofficial articles not included in New and Nonofficial Remedies.

Group Hospital Service News

GROUP HOSPITAL SERVICE MARCHES ON

Progress of Non-Profit Free-Choice Hospital Service Plans:

DATE	NO. OF PLANS	ENROLLMENT
January 1, 1933	1	2,000 Estimated
July 1, 1933	5	6,000 Estimated
July 1, 1934	9	26,000 Estimated
July 1, 1935	12	97,000 Estimated
July 1, 1936	24	370,000 Estimated
July 1, 1937	33	970,000 Estimated
January 1, 1938	38	1,360,000 Estimated
July 1, 1938	41	1,950,000 Estimated
January 1, 1939	48	2,870,000 Estimated
July 1, 1939	56	4,030,000 Estimated
January 1, 1940	60	4,500,000 Estimated
September 1, 1940	61	6,000,000 Estimated

Our plan is No. 61, but it did not contribute that additional 1,500,000 members. It has, however, through over 100 firms and organizations, extended protection to 8,000 of our citizens, and its steady growth continues. It has paid 105 hospital bills. These members were provided 471 days of hospital care. The average stay per case was 5 4/10 days.

In this accomplishment, our plan has somewhat exceeded the Missouri Plan, the principles of which it adopted, and which in four years has attained commendable success. The comparison is made with recognition of this attainment and is employed merely to measure our own progress.

Four years ago, the American public did not enjoy its present knowledge of this program—its principles and community resources. But we cannot coast on the educational work of others in the past. An educational



program demanding action by every professional man stands between us and our goal. Commercial, competitive forces—some acceptable—some deplorable, lack of public knowledge and other deterring influences have arisen to confuse and retard. Those influences must be removed.

There are those in Oklahoma who innocently believe and passively accept Group Hospital Service as "just another plan." They accept it as an endeavor that has been blessed with the approval of the Oklahoma State Medical and the Oklahoma State Hospital Associations. This knowledge should be increased to a realization that Group Hospital Service of Oklahoma was inaugurated by the Oklahoma State Medical Association and the Oklahoma State Hospital Association. Members of these Associations, with the assistance of the lay people, operate and manage Group Hospital Service. It is a plan by the people of Oklahoma for the people of Oklahoma. And these factors provide the basis for our educational work.

Every principle of this plan respects the rights and privileges of the professional man. Only a few plans have exercised such care and precaution. The doctors, too, have exercised care and respect for the plan in caring for their patients. This is reflected in the average hospital stay of only 5 4/10 days. Many plans are having to plead for this respect and protection. The Oklahoma Plan should and must always enjoy this distinction.

The American Hospital Association in Chicago has frequently answered inquiries from industrial firms with the statement that the united support of the State Medical Association is sufficient to make Group Hospital Service here financially sound and insure its success. That Association requested 100 copies of the "President's Page" from our July issue and forwarded them with a complimentary letter to all plan executives in the United States.

Truly, "The eyes of the country are upon us." We have launched our ship—let us spread its sail. We are in an enviable position—let us maintain it. We can talk Group Hospital Service to our patients, our friends and associates. They are interested—they appreciate this knowledge and advice. No one can tell when he will be sick or what his sickness will cost him. Hospitalization is unpredictable; it requires absence from gainful employment and it is usually accompanied by other expenses for professional service. Consequently, the hospital bill is peculiarly an economic hazard, and hospital bills have been difficult to pay.

Group budgeting of hospital care, by which individuals "prepay" the necessary cost of hospitalization is a way to remove this economic hazard from the sick individual and his family. It is not merely an idea, but an accomplished fact.

Our plan was founded on principles evolved from over a decade of experience. The experiences and accomplishments in extending protection to 6,000,000 people give evidence of sound practices and the ability to meet social and contractual obligations to members and hospitals.

As a pioneer in the health field, the non-profit plan has developed community consciousness to a point of civic proprietorship.

It tends to preserve for health professions and institutions the duty and privilege of caring for and healing our sick, wounded and afflicted. It encourages scientific research and progress in the health field; discourages governmental interference and regimentation of our cherished health facilities.

Dr. J. H. Coogan, who has served as physician for the Quapaw Indian Agency, with headquarters in Miami, for the last year, has left for Carson, Nev., where he will practice under another agency. Dr. Coogan was a member of the Ottawa County Medical Society. He is being succeeded by Dr. Louis N. Dakil of Pottawatomie, Kan.

• OBITUARIES •

Dr. Charles Robinson Hume
1847-1940

Death closed the pages on a long life of distinguished service in both medical and lay activities when it came to Dr. Charles Robinson Hume, Anadarko pioneer, August 9, in his 92nd year. Dr. Hume died at the home of a son, C. Ross Hume, in Anadarko, after he had been bedfast for nearly a year.

A former president of the Oklahoma State Medical Association, and an honorary member in late years, Dr. Hume had lived in Anadarko for nearly 50 years, and with his death, memories of service to the entire Kiowa Indian reservation are revived in the minds of aged Indians and whites alike. For the first five years of his practice in the five-county area, the physician gave medical aid to the Indians without any assistance.

Doctor Hume was born in Riga, Monroe County, New York, on October 21, 1847, and moved with his parents to Michigan in 1854. Twenty years later he was awarded his degree in medicine from the University of Michigan. His first practice was begun in Wood County, Ohio, and he was married to Annette Ross, December 27, 1876, in Perrysburg, Ohio. Following the Perrysburg medical practice, the couple moved to Tontogany, Ohio, where two sons, C. Ross and Raymond R., were born. In January, 1881, the family moved to Caldwell, Kansas, where Doctor Hume remained until 1890. During their Caldwell residence, two sons and a daughter were born and died in infancy.

Appointment as Kiowa Indian Agency doctor brought Dr. Hume to Caddo County on December 1, 1890, and his family followed a month later. Mrs. Hume died in January, 1933, and Dr. Raymond R. Hume died in Minco in August, 1935.

Dr. Hume was the oldest living member in continuous affiliation with the Anadarko Presbyterian church, establishing his membership in 1891. Until retiring from his position ten years ago, Dr. Hume served as either a trustee or elder of the church from his time of membership. A charter member of the Sons of the American Revolution in the state chapter at Oklahoma City, the physician was given honorary membership when he retired at the age of 80.

At the organization of Caddo County, he was appointed as first county health officer, holding the position until statehood. He was the first president of the Caddo County Medical Society, and for many years was secretary-treasurer of the organization. He was Councilor for the third district of the State Association for six years, and in 1914 was made vice-president. He served as president in 1916.

Included in the survivors are his son, C. Ross Hume, Anadarko; three grandchildren, Ross G. Hume, of Oklahoma City, Mrs. James H. Hammond of Tulsa, and Mrs. John R. Black of Los Angeles, Calif.; and two great-grandchildren, Charles Robert Hume of Oklahoma City, and James H. Hammond II.

Funeral services were conducted from the First Presbyterian Church in Anadarko August 11, with the Rev. Lewis R. Rogers officiating. Interment was in the Anadarko cemetery.

Dr. John Archer Hatchett
1853-1940

Many years of active service in the practice of medicine came to a close for one of the state's best-known physicians Friday morning, August 16, when Dr. John Archer Hatchett, beloved longtime member of the profession, succumbed to an extended illness at his home in Oklahoma City.

Dr. Hatchett, who was 87 years of age at the time

STUDIES IN THE AVITAMINOSES



This page is the ninth of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the August 17 issue of The Journal of the American Medical Association.



Casal's collar in a patient with advanced pellagra secondary to chronic alcoholism.

Illustration courtesy of Virgil P. W. Sydenstricker, M.D., University of Georgia Medical School, Augusta.

The scaling symmetrical pellagrous dermatitis of the hands.



The Dermatitis of Pellagra

The severe scaling dermatitis of the hands seen in most cases of advanced pellagra is pathologically identical with skin lesions developing elsewhere on the body surface. Microscopically, thickening of the skin, lymphocytic infiltration of the dermis, and hyaline degeneration of the intima of the smaller arterioles are observed. The early clinical changes consist of burning, tenderness, erythema, pigmentation, and mild vesiculation. The acute character of the eruption disappears after a variable period but if no treatment is instituted, the pigmentation becomes more intense and the scaling and desquamation more severe. As with other pellagrous skin lesions, the dermatitis of the hands is bilateral and symmetrical, and is sharply demarcated from the adjacent normal skin.

The dermatitis which frequently appears on the neck is known as Casal's collar. The lesion assumes its peculiar distribution because of the provocative action of sunlight upon the skin of pellagrins. The neck, exposed to the influence of sunlight, is thus frequently the site of the pellagrous dermatitis. However, unexposed portions of the skin, notably the upper thighs and perineum, may become similarly involved.

UPJOHN

of death, remained active in medical practice until only about a year ago, when he retired.

A pioneer El Reno physician, Dr. Hatchett lived in that city from 1891 until 1920, when he moved to Oklahoma City to continue his practice. When in El Reno, he organized the El Reno Sanitarium, and was associated with Dr. T. M. Aderhold in the operation of the hospital until his retirement from the partnership and his moving to Oklahoma City in 1920. In El Reno, he served as president of the El Reno State Bank, which later was merged with the Citizens National Bank.

In 1902, the El Reno Sanitarium organized the first nurses' training school in Oklahoma, and during his connection with the institution, Dr. Hatchett was one of the instructors. During his early days in Canadian County while ministering to the needs of the pioneer citizens, many of whom were in extreme want, Dr. Hatchett rode a saddle horse, Dick to make his rounds. On the death of the equine, he resorted to a buggy for his trips until the autos came into general use.

Dr. Hatchett was a graduate of the Missouri Medical College, St. Louis, receiving his degree in 1884. He was widely known in medical circles over the state, and at the time of death was professor emeritus of obstetrics at the University of Oklahoma School of Medicine, having been a member of the faculty for many years. During his residency in Oklahoma City, he served at one time as President of the Oklahoma County Medical Association, and in 1933 was elected to membership in the Oklahoma Memorial Association Hall of Fame as one of the early Oklahoma physicians who contributed much to the advancement of his profession. In recent years he was honored with honorary membership in the State Medical Association.

Immediate survivors are his wife of the home in Oklahoma City; a son, Ray Hatchett of Oklahoma City; and two daughters, Mrs. C. E. Clymer and Mrs. P. P. Duffy, both of Oklahoma City.

Funeral services were conducted from the chapel of the Garrison Funeral home in El Reno on Sunday afternoon, August 18, with the Rev. M. B. Pringle, pastor of the First Christian Church in El Reno, officiating. Interment was in the El Reno cemetery, with six Oklahoma City physicians with whom he had been associated serving as pallbearers. They were Dr. Patrick Nagle, Dr. Tom Lowry, Dr. Dick Lowry, Dr. Bert Keltz, Dr. W. W. Wells, and Dr. J. B. Eskridge.

Grants Made For Venereal Disease Control

An allotment of $5,672,388 has been made by the U. S. Public Health Service to the states and territories and the District of Columbia for venereal disease control during the coming year, according to an announcement by the Journal of the American Medical Association.

A special portion of these grants, amounting to $458,600, has been allotted on the basis of the extent of military and national defense industrial concentrations. The remainder will be used to further research in new methods of treatment and diagnosis of syphilis and gonorrhea, for training of personnel, for coordination of educational efforts, and for cooperation with the states in planning and administration of the control program.

Squibb Executive Succumbs at Connecticut Home

Theodore Weicker, Chairman of the Board of E. R. Squibb and Sons, died at his home in Greenwich, Conn., August 7, in his 80th year.

Funeral services were conducted Friday, August 9, at the Riverside Church, Riverside Drive and 122nd Street, New York City.

Mr. Weicker was born in Darmstadt, Germany in 1861. Upon graduation from school, he joined the old German house of E. Merck, advancing to an executive position in a few years. In 1882, he went to London, becoming associated with a general export house where he took charge of the development of its foreign business.

In 1887, he sailed for New York to make his career, and acquired citizenship in the shortest time provided by law. At his insistence, the firm of Merck & Co., discarding a two-hundred-year-old tradition, established a branch in this country. Mr. Weicker became partner in the American enterprise and remained as managing partner of the New York branch of Merck & Co. for fifteen years.

In 1905, following the death of Dr. Edward R. Squibb, founder of the House of Squibb, Mr. Weicker joined with the late Lowell M. Palmer, a leading capitalist, to buy and preserve the name of E. R. Squibb & Sons. Bringing with him a keen commercial talent and business imagination, Mr. Weicker was responsible for the large growth of the Squibb Company.

He conceived the idea of extending to the general public, under strict professional supervision, information previously available only to a discerning few. Mr. Weicker proposed to reach this objective through general advertising, and he put forth an educational plan to make known to the broad public the name and ideals of his House through the advertising pages of the public press.

Doctors Needed For CCC Service

Physicians are needed for the medical service of the Civilian Conservation Corps, according to the Surgeon of the Seventh Corps Area.

The initial salary is $3,200 a year. No quarters are provided for families, and the physicians are required to pay for their own food at camps. Temporary quarters for physicians are provided at the camps for a nominal fee. Those selected must pay their travel expenses to the headquarters of the district, where they are placed on temporary duty before being sent to camp. The principal duties at camps consist of the medical care of the enrollees and the practice of preventive medicine.

Eligibility requirements are that the physician must be a citizen of the United States, a graduate of an accredited medical school, licensed to practice medicine and physically able to perform the duties. Physicians over 60 years of age are not ordinarily employed.

Those interested are requested to submit applications placed on temporary duty before being sent to camp. to the Office of the Surgeon, Headquarters, Eighth Corps Area, Fort Sam Houston, Texas, giving date on which available and preference of assignment in the following states.

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Cancer Society's Poster Contest Attracts Many Entrants

Hundreds of letters have been received from artists asking for information on the poster contest which the National Alliance of Art and Industry, Inc., is sponsoring for prizes offered by the American Society for the Control of Cancer, according to the National Bulletin of the Society. Requests for entrance blanks have come from every state in the union.

The purpose of the contest is to secure a poster, or group of posters, which will dramatize the fight against cancer, the Bulletin said. Accordiug to the rules, posters are to be drawn "to stimulate public interest in the control of cancer, to further the support for the educational movement, to encourage endowment for research, and to deliver a hopeful message to a public to which the very word cancer spells fear." Posters will be received from October 1 to 12 by the National Alliance of Art aud Industry, Inc., and will be judged on October 14.

Prizes total $1,875 and will be awarded by a jury of artists, publicists, and scientists, headed by Harvey Wiley Corbett, N. A., former president of the Architectural League of New York. The first prize is $1,000 and the winning posters will be used in the 1941 campaign of the Women's Field Army. There is a second prize of $500, a third of $250, a fourth of $50, a fifth of $25, and four of $10. All winning posters become the property of the American Society for the Control of Cancer.

Tobacco Possible Source of Arsenic Poisoning

Tobacco as a possible source of arsenic poisoning is suggested in The Journal of the American Medical Association by E. E. Barksdale, M.D., Danville, Va., who points out that lead arsenate has been used for years by farmers as an insecticide on the plant to kill the horn worm. He presents a series of cases of skin rashes, in none of which was it possible to determine any source of arsenic other than tobacco. As result of his findings in a group of patients being treated for syphilis he believes that any person under syphilitic treatment who gets a skin inflammation after injections of arsphenamine should not use tobacco in any form.

Dr. Barksdale says that all of the tobacco ou the American market contains arsenic in a form which may be taken up by the human body and that nothing is done during the agricultural or manufacturiug process to remove it and that probably nothiug can be done.

"Lead arsenate is essential to the tobacco industry," he says. "It should be considered as an iudustrial hazard. Farmers use it as an insecticide because it is the most efficient and inexpensive one available. Iudeed, its efficiency is probably responsible for the fact that it remains on the tobacco when it reaches the consumer. It has the property of sticking to the tobacco. This is the reason why it is so effective. Remaining on it throughout, it kills the young worms as they are hatched. It is impossible to wash it off because in so doing the tobacco would be ruined. There is no chemical process known that will remove it."

In discussing eight cases of arsenical skin inflammation. Dr. Barksdale says: "All the patients were emphatically cautioned against the use of tobacco and they recovered and have remained so since. Three of them have had mild recurrences every time they used tobacco."

He says that it is believed that patients get this dermatitis (skin inflammation) because they have a low point of tolerance to arsenic. "Fortunately, the point of tolerance for arsenic of most persons is much higher than the amount of arseuic that one could consume from tobacco," he adds.

In conclusion Dr. Barksdale carefully points out that: "This paper has attempted to present a theory. Its ultimate proof depends on the collaboration of other workers."

COLLEGE OF PHYSICIANS' 1941 MEETING HEADQUARTERS ANNOUNCED

An annouucement has beeu made that the twenty-fifth annual session of The American College of Physicians will be held in Boston during the week of April 21, 1941.

Headquarters will be at the Hotel Statler. The Executive Offices of the Oklahoma State Medical Association will be glad to make reservations for any of the state physicians planning to attend.

Allergic Disorders Suffered By Many

"In the United States at least 3 per cent of the population is affected by allergy of the upper air passages, but general allergic disorders may affect as many as 60 to 70 per cent." Leon Felerman, M.D., Philadelphia, points out in the September issue of Hygeia, The Health Magazine in a discussion of hay fever.

In classifying allergic persons in four groups, he explains that hay fever victims belong to the inhalant group, the respiratory organs being maiuly affected. Other classifications include the ingestant group, in whom certain foods may produce an intolerable itching; the contactant group, who get a rash from coming in coutact with such substances as wool, silk or certain cosmetics, and the injectant group, who react to injection of serum.

"Hay fever is not caused by hay, nor is it accompanied by an elevation of body heat," Dr. Felderman observes. However, he says that most of the other names for the condition are likewise misleading, or at least fail to impart precise information on the causative factor. Here are a few of the iuadequate synonyms: rose fever, rose cold, perennial hay fever, allergic coryza, hyperesthetic rhinitis, pollen coryza, pollen catarrh, pollinosis, hay asthma, summer catarrh and Heufeber.

"Hay fever plays a devastatiug role in the earnings of the 5 million victims," the author says. "Those who suffer from this malady annually lose on the average of two to three weeks' time from work, which wheu multiplied by 5 million is quite an economic loss.

"Hay fever is uuheard of among the thick skinned savages, and no sufferer of this malady will begrudge the otherwise benighted heathen this healthy distinction. The condition has a selective affinity for the intelligent sia rather than the brawn worker.

"The pollen causing hay fever can come from flowers trees, grasses and weeds. For the pollen to be an irritant, it must fulfil five postulates: First, there must be present in the pollen an excitant of hay fever. Second, the pollen must be wind borne. Third, the pollen must be present in sufficiently large quantities. Fourth, the size of the pollen grain must be such that it will be sufficiently buoyant to be carried long dstances. Fifth, there must be an abundant growth of the pollen-producing plant of a considerable area.

"A patient who suffers severely may start with preseasonal treatment, which commences two or three months prior to the attack; in a mild case, coseasonal treatment is indicated."

There is also the perennial treatment, Dr. Felderman points out, which is carried on throughout the year ordinarily at intervals of from one to three weeks. "The modern precise concept of hay fever makes it possible to desensitize a patient against pollen or foodstuffs and give him relief from the annoying disorder," he says.

Board Grants 191 Certifications

The American Board of Obstetrics aud Gyuecology at its examinations held in Atlantic City, N. J., in June granted certification to 191 of its 242 candidates. The next examinations for group B, part I, candidates will be given January 4, 1941, and for group A and group B, part II, at Cleveland in June, 1941, immediately prior to the meeting of the American Medical Association. Applications may be obtained from Dr. Paul Titus, 1015 Highland Building, Pittsburgh (6), Pa.

"CONGESTION DUE TO SMOKING RETURNED WITHIN ONE WEEK

in 80% of the cases, on changing back to cigarettes made by the ordinary method!"

The information quoted is from tests reported in Laryngoscope*. While Philip Morris do not claim to cure irritation, here is what the tests revealed: *When smokers with irritation of the nose and throat due to smoking changed to Philip Morris, irritation cleared completely or measurably improved.*

On changing back, congestion returned in 80% of the cases.

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**Feb. 1935, Vol. XLV, No. 2, 149-154*

Journal of A. M. A. Refutes Life Magazine Statement

"In Life, which is a picture magazine, for August 19 appears an article entitled 'Osteopathy's "Cure-By-Manipulation" Is Attacked by Regular Physicians,'" The Journal of the American Medical Association for August 31 states. "Here a small amouut of text is supplemented by a number of photographs, evidently made in or supplied through the osteopathic shrine at Kirksville, Mo., known as the Kirksville College of Osteopathy and Surgery. In the very brief text which accompanies the pictures appear a number of misstatements of fact which, it is not too confideutly expected, the magaziue may correct. Many of these misrepreseutatious have been repeatedly exposed in The Journal. In the second paragraph of the article, for example, appears this statemeut:

"In 33 States qualified doctors of osteopathy are permitted to practice on equal or almost equal footiug with doctors of medicine. Osteopaths cau and do deliver babies, perform surgery, prescribe drugs and take full charge of patieuts.

"The facts are that in only four states (Colorado, Massachusetts, New Hampshire and Texas) for certain, aud perhaps in a fifth (Kentucky), may osteopaths now legally prescribe or dispense drugs without restriction. This is true in the first four states meutioned because iu those states osteopathic applicants, if licensed at all, must meet the requirements exacted of applicants to practice medicine generally. To this list may be added, after November 1, 1941, a sixth state (New Jersey), where osteopaths licensed after that date will be subject to the same requirements as nonsectarian applicauts aud will receive au unlimited liceuse to practice medicine.

"Experience has shown that few osteopaths indeed are able to meet the requiremeuts exacted of applicants to practice medicine generally. In twelve states osteopaths are given limited right to use certain drugs, the drugs coucerued varyiug in the various states. Iu eight states osteopathic licentiates generally may not use drugs, but the laws contain provisions whereby osteopaths may, under certain conditions, obtain licenses by virtue of which they may use drugs, the law of one of these states eveu then permitting the use only of a very limited number of drugs. In eight states osteopaths are specifically denied the right to use drugs. In nine states osteopaths secure licenses ouly to practice osteopathy, without defining the scope of the practice premitted, but no court has ever held that the right to practice osteopathy includes the right to use drugs. In seven states osteopaths are licensed to practice osteopathy as taught in recognized schools of osteopathy which, in effect, denies them the use of drugs, aud the Supreme Court of Kansas has recently held that the right to practice osteopathy as taught aud practiced in recognized schools of osteopathy confers no right on osteopaths to practice operative surgery or to use remedial drugs.

"To summarize: In tweuty-four states osteopaths legally cannot under any circumstances use drugs. In eight states by far the greatest number of osteopaths cannot use drugs but it is possible for candidates possessing stated qualifications to obtain that right. In twelve states osteopaths may utilize stated drugs to a limited extent. Only in five states, probably, may osteopaths use drugs without restriction. Obviously, then, from the standpoint of the right to use drugs, which an osteopath must possess if he is 'to practice on equal or almost equal footing with doctors of medicine,' the article in Life is, to put it charitably, indulging in gross exaggeration when it states 'In 33 States qualified doctors of osteopathy are permitted to practice on equal or almost equal footing with doctors of medicine.'"

Provisional Death Rates For 1939 Shown

The Bureau of the Census announces that provisional tabulations of deaths in continental United States in 1939 show a crude death rate of 10.7, as compared with 10.6 for 1938. The bureau points out that the apparent increase may be due to the use of the 1938 estimate of population in computing the 1939 rate and that the difference may disappear or be reversed when the new census figures are available.

Rates for individual states are computed on 1937 estimates of population and are therefore higher for some states than they would be if computed on 1939 estimates.

Tweuty states show lower crude rates in 1939 than in 1938, tweuty-one states and the District of Columbia show higher rates, and seven states show no change, the report said. The greatest decreases occurred in Rhode Island, South Carolina, Georgia, North Carolina, Alabama and Arizona; the largest increases in the District of Columbia, Idaho, Iowa and Moutaua. The highest rates were for Arizona (14.2 per thousand of population), New Mexico (14.1), District of Columbia (13.2) and Florida (12.8). The lowest rates were for North Dakota (7.7), Oklahoma aud South Dakota (8), and Arkansas (8.1).

The report emphasized that differences in crude death rates do not necessarily indicate corresponding differences in health conditious. Age, sex, and racial distributions are factors that affect the crude death rate, aud these distributions differ in the various states.

Canadian Medical Association Elects

Dr. Gorden S. Fahrni, Winnipeg, was elected President-Elect of the Canadian Medical Association at the annual meeting in Toronto in June, and Dr. Duncan Graham, Toronto, became President.

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A. M. A's President-Elect Well-Known to Profession

"Perhaps the greatest single attraction in the field of graduate medical education in the United States for a number of years has been Dr. Frank Howard Lahey of Boston, just elected to the position of President-Elect of the American Medical Association, shortly after passing his sixtieth birthday," the Association's Journal says in a recent editorial.

He was born in Haverhill, Mass., on June 1, 1880, and received the degree of doctor of medicine from Harvard University in 1904. After his graduation he served as surgeon in the Long Island Hospital in 1904-1905 and in the Boston City Hospital, 1905-1907, and became resident surgeon of the Haymarket Square Relief Station in 1908 and instructor in surgery in Harvard Medical School, 1908-1909 and from 1912 to 1915. He was assistant professor and later professor of surgery in Tufts Medical School from 1913 to 1917. He also served as professor of clinical surgery in Harvard Medical School in 1923-1924. He has been for some time surgeon in chief of the New England Deaconess and New England Baptist Hospitals and director of surgery in the Lahey Clinic.

During the World War he served as major and also as director of surgery in Evacuation Hospital 30. He is a regent of the International College of Surgeons in Geneva, fellow and a member of the board of governors of the American College of Surgeons and a member of the American Surgical Association and the American Association for the Study of Goiter. His chief literary contribution, in addition to many periodical articles, is the Lahey Clinic number of the Surgical Clinics of North America. He has been a member of the editorial boards of Surgery, Gynecology and Obstetrics and of the New England Journal of Medicine.

In the American Medical Association he was appointed by President Jabez N. Jackson at the Washington session in 1927 as a member of the Council on Scientific Assembly for a term of five years (to end in 1932); he was reappointed for a five year term (to end in 1937) by President E. H. Cary at the New Orleans session in 1932. He was appointed by President Irvin Abell at the San Francisco session in 1938 as a member of the Council on Medical Education and Hospitals for a term of seven years and resigned following his election to the presidency. He was also a member of the Advisory Committee to Cooperate with the Bureau of Medical Economics of the American Medical Association Outlining the Necessary Procedure for Making Studies and Reports of the Prevailing Need for Medical and Preventive Medical Service, later called the Committee on Medical Care), which was established by the Board of Trustees at its February 1938 meeting. He was secretary of the Section on Surgery, 1926-1929, and chairman of the Section on Surgery, 1929-1930.

"It is doubtful that any other surgeon in the United States is more widely known to the medical profession throughout the nation than is Frank Howard Lahey. He has traveled widely and often and has given freely of his time for improving the quality of surgical diagnosis and procedure. He is a proficient speaker and will fill with dstinction the new position of leadership which has just been given to him."

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New Inspection Lamp Developed For Cataract Surgery

A new and highly efficient ultra-violet inspection lamp for cataract surgery, developed with the collaboration of Dr. Elliott B. Hague of Buffalo, N. Y., and described in the March 1940, issue of the American Journal of Ophthalmology, Page 317, has been announced by American Optical Company.

The new Hague lamp is a bulb-type, mercury vapor (ultra-violet) lamp with special filter, contained in a parabolic reflector with pistol grip for convenience in manipulating. Its transmission characteristics are such that it projects a full beam of ultra violet light of maximum intensity at 3650 Angstrom units, which, if directed into the eye, will cause the crystalline lens to fluoresce.

The lamp may be used for the following purposes: (1) To identify cortical residue or remnants of capsule following extra-capsular cataract extraction. (2) To visualize the anterior capsule of the lense in intracapsular extraction. (3) To locate dislocated lenses. (4) To recognize fine, superficial, corneal abrasions stained with fluorescein without the use of a corneal microscope or slit lamp. (5) To detect slight lesions of the lid, more or less imperceptible by ordinary light. (6) Other uses aro being investigated.

The lamp possesses the following advantages: (1) Safety. Rays produced include practically the useful, nonharmful waves. Biological experiments with rabbits' eyes, human eyes, and human skin have completely confirmed this . (2) Convenience. The lamp is light, compact, portable, easy to hold, and simple to manipulate. In comparison to a carbon arc, it gives a much more uniform and stable illumination. (3) Efficiency. The supply of fluorescing ultra violet is greater than in previous lamps. More intense fluorescence is obtained which makes it possible to use the lamp under general illumination.

Tuberculosis Death Rate Drops

In 1939 there were 61,184 deaths from tuberculosis in the United States as compared with 63,677 in 1938, the Bulletin of the National Tuberculosis Association reports. The death rate dropped from 48.9 per hundred thousand of population in 1938 to 46.6 in 1939.

Except for Delaware, the death rate in all states declined or remained within one decimal point higher than in 1938 figures. The lowest rates were in Nebraska (15.8), Utah (16.8), Iowa (18.5), Idaho (19.7), and North Dakota (20.2). The highest was in Arizona (191), but that was a decline from the 1938 rate of 221.6. The New Mexico rate remained the same, 91.2 for both years. The rate in the District of Columbia declined from 92.2 to 88.3.

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Mental Reactions May Result From Sugar Insuffiency

Some abnormal nervous and mental reactions may be due to a disturbance in the utilization of such carbohydrates as dextrose (sugar) by the brain, G. Wilse Robinson Jr., M.D., and Prior Shelton, M.D., Kansas City, Mo., suggest in The Journal of the American Medical Association. This disturbance, they say, may be the result of an improper functioning of the whole metabolic process (whereby the energy of life is produced in the body).

Their conclusions are contained in a preliminary report of their study of sixty-nine nervous and mental patients. The presence of sugar in the urine does not necessarily indicate diabetes mellitus (insufficient production of insulin with which to utilize sugar), they say.

"The physician in general practice," the two men advise, "should keep this fact in mind when he is consulted by patients who present a symptom complex of 'nervousness,' fatigue and ready exhaustability, vague somatic (body) complaints and the picture that is usually diagnosed 'psychoneurosis.' If evidence of disturbed carbohydrate metabolism is found, a high carbohydrate diet with adequate insulin to insure combustion will be a valuable aid in the treatment program.

"Regardless of its place in the etiologic picture, the dextrose tolerance should be corrected as quickly as possible during the general therapeutic management of the case. Only after improvement of feeling tone and general metabolism can special measures, such as shock and mental treatment, be readily effective.

"The diagnosis of diabetes mellitus in patients with a history of nervous and nervous type conditions must be made with caution, for only after a long period of observation and treatment to correct malnutrition, metabolic disturbances resulting from improper habits, nervous tension states and other factors as yet undetermined can such a diagnosis be made."

Discussing the metabolism of the human organism, the Missouri workers state that with this in mind "it is easy to understand how neurotic, overanxious types, those who suffer from anorexia (loss of appetite) during physical or mental illness may upset their carbohydrate metabolism balance with depletion of reserves, suppression of secretion of body insulin and the development of toxic (poisonous) states from improperly metabolized fats and proteins."

All this, the authors explain, deprives the brain of its only energy-producing food — the sugar resulting from carbohydrate metabolism. The brain does not store dextrose or sugar and therefore a constant and continuous supply of carbohydrate is necessary. "It is certainly not illogical," Drs. Robinson and Shelton point out, "to assume that a disturbed carbohydrate metabolism will disturb the functioning ability of the brain to some degree. Diabetic and diabetic-like curves of circulating sugar in the blood are common in nervous and mental patients." They found such curves in forty-four of the sixty-nine patients.

"We feel," they continue, "that these abnormal curves result from malnutrition. The nervous and mental patient usually goes through a prolonged period before admission (to the hospital) when hygienic habits are poor, diets are improper and various food superstitions are followed. General metabolism is frequently poor.

"We have observed beneficial effect from small doses of insulin (which helps metabolize carbohydrate) and a high carbohydrate intake on various mild mental disorders, chronic alcoholism, and delirium tremens.

"We felt that the basic ability of the organism to utilize dextrose," they conclude, "must be impaired in some way if these stimulations to carbohydrate metabolism brought about improvement in our patients."

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Medical Education Improving, Wide Survey Reveals

Medical education in the United States is constantly improving, the Fortieth Annual Presentation of Educational Data by the Council on Medical Education and Hospitals of the American Medical Association, published in The Journal of the Association for August 31, shows.

Discussing a survey of all medical schools in the United States and Canada, report of which was released last January, the Council says: "Reports received from a large number of medical schools and follow-up inspections of many indicate that, as a result of the Council's survey, substantial improvements have been and are being made. Where facilities were inadequate the size of classes has been reduced, entrance requirements have been raised, the teacher-student ratio in the basic medical science departments in 1939 was 1:8 as compared to 1:11 in 1934, clinical facilities have been improved, budgets have increased and curriculums have been revised."

Additional evidence of the improvements in medical education is contained in the Council's figures on the number of students in and graduates from the seventy-seven medical schools in the United States. Although in 1940 there were thirty-one fewer students enrolled than in 1939 there were eight more graduates in 1940 than in the previous year, reflecting the value of the increasing care being exercised in the selection of students by the schools.

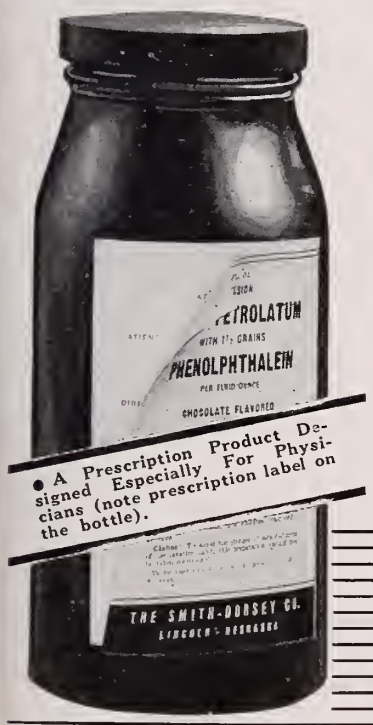
The data in The Journal contain the usual report on preliminary and undergraduate medical education with a description of the approved medical schools and revised lists of hospitals approved for the training of interns and approved for residencies and fellowships in the specialties. A summary of the activities of the various agencies interested in continuation courses for practicing physicians is also given, as well as the Principles Regarding Graduate Medical Schools ratified by the House of Delegates of the American Medical Association at its recent New York session. In addition, there are included the official requirements of each of the fifteen approved examining boards in medical specialties. These data are based on official reports.

Discussing preliminary education, the report says: "The Council's minimum requirement for admission to approved medical schools is two years of college training which include English, and theoretical and practical courses in physics, biology and general and organic chemistry. Three years or more in college is, however, recommended. Since it cannot be generally assumed that all who have satisfied these requirements in terms of hourly credits are fitted for the study of medicine, qualitative standards also are imposed.

"For the session 1939-1940, sixty-six of the seventy-seven medical schools in the United States had a premedical prerequisite in excess of the minimum. For 1940-1941 only nine schools will admit students with less than three years of preparation.

"The general trend toward three or more years of college work would appear to be due to a desire for more thorough grounding in all branches of chemistry and greater familiarity with nonscience subjects, such as literature, history or economics.

"In 1936-1937, 12.5 per cent of the entering class had only the minimum of preliminary education, but by 1938-1939 the number had dropped to 3.8 per cent and in 1939-1940 to 2.0 per cent.



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"With but five exceptions, uamely California, Connecticut, Massachusetts, Missouri aud Nebraska, the state licensing boards require two years of preliminary college traiuiug. The law in Massachusetts will change in 1941. Although the statutes do not include the two year college requirements, these states with the exception of Massachusetts do not license other than graduates of approved schools. Alaska, Hawaii and Puerto Rico likewise require two years of preliminary training."

Sixty-seveu medical schools in the United States and nine faculties of medicine of Canada are listed in the report; also ten schools of the basic medical scieuces in the United States and one in Canada. All but three of these schools at the present time have the approval of the Council, the three being on probation.

"Medical students enrolled in institutions in the United States and Canada number 24,194, exclusive of 1,152 fifth year students in the United States interning or engaged in research and 132 in Canada interning as a requiremeut for the degree of Doctor of Medicine or in order to be eligible for licensure," the report says.

"Since July 1, 1939, 5,703 received the degree of Doctor of Medicine, 5,097 from schools in the United States and 606 from Canadian institutions."

The University of Illinois College of Medicine, with awards of 162 diplomas, granted the greatest number of degrees. The Woman's Medical College of Pennsylvania, with 18, graduated the lowest number. Twenty-three schools granted degrees to classes of fewer than fifty students, thirty-three schools graduated between fifty-one and 100 each, seventeen from 101 to 150 and three less thau 200 but more than 150.

Discussing birthplace of students, the Council says: "The greatest number of students registered, 2,776, according to state of birth, was from New York, followed by Pennsylvania with 1,867, Illinois with 1,356 and Ohio with 1,068.

"Foreign born students were matriculated in sixty-eight of the seventy-seven medical schools in the United States. There were 511 so enrolled, of whom thirty-two each were studying at the College of Medical Evangelists, Los Angeles, and the University of Illinois College of Medicine, twenty-five at New York University College of Medicine and twenty-four at Harvard Medical School. Other schools registered fewer than sixteen. It may be presumed that many of these are uow citizens of the United States."

Medical schools are located in thirty-six states and the District of Columbia, the report says. Nine are located in the State of New York, which naturally had the greatest number of students and graduates, 2,589 and 597 respectively. Pennsylvania with six schools had 2,337 students and 569 graduates; Illinois with five schools, 1,979 students and 574 graduates ranked third, while Massachusetts with three schools, 1,113 students and 282 graduates completes the group of states having an enrolment of more than 1,000, although California with four schools had 999 students and 259 graduates.

"Twelve schools in the United States and three in Canada require an internship for graduation," the Council reports. "Several medical schools accept research or other clinical work iu lieu of hospital service.

"The medical licensing boards of twenty-two states, the District of Columbia, Alaska, Hawaii and Puerto Rico require that all candidates for licensure possess a hospital iuternship. The first state to adopt this requirement was Pennsylvania in 1914. In addition, other states exact the internship of graduates of faculties of medicine abroad and of applicants for reciprocity or endorsement. Some of the medical schools and licensing boards have their own list of hospitals acceptable for intern traiuing but the Council's approved list is generally in use.

"There were 1,152 studeuts in the United States and 132 in Cauada reported as completing the fifth or intern year requirement of the medical schools which exact the fulfillment of the internship as requisite for the M.D. degree. In addition, statistics computed indicate that 98 per cent of the graduates of recent years have obtained or are obtaining this added experience."

In a discussion of this phase of medical education, The Jourual, in an editorial in the same issue, says: "The interuship is an established institution in this country, mutually profitable to both hospitals and interus. Each year more hospitals seek the privilege of instructing interns. Even in those states in which an internship is not legally required for licensure, practically all medical graduates voluntarily serve this form of apprenticeship. The merits of 'straight,' 'mixed' and 'rotating' iuternships are still debated; probably all of these types are desirable and no one of them should be adopted to the exclusion of others."

Referring to an article on "Responsibility for Choosing Interus and Internships," by William Dock, M.D., San Francisco, in the same issue of The Journal, the editorial says that Dr. Dock "argues that medical studeuts should secure intern appointments largely through their own efforts rather than through the agency of the dean or intern committee. Dr. Dock points out that assumption of responsibility for placing its graduates or fifth year students by the school incurs an obligation to those hospitals which benevolently accept candidates who rank amoug the lowest in their class. Having recommended such a man in the fall of his final year, the faculty would scarcely dare to flunk him in June. A fortiori, medical schools should not make the internship a part of their requirement for a degree."

During 1939-1940 there were 1,145 women studying medicine in the United States, constituting 5.4 per cent of the student enrolmeut. There were 253 graduates, seven less than in 1939. Eighteen were graduated from the Woman's Medical College of Pennsylvania, while 235 secured their degrees from coeducational schools. In the years since 1925, 3,521 women have graduated in medicine. Statistics compiled by the American Medical Directory revealed that there were 7,470 women physicians in the United States.

"Of the 6,005 students selected for the freshman class for the session 1935-1936," the report says, "it is interesting to note that 736 failed or for other reasons did not undertake sophomore studies and further that 1,019 had dropped out by the end of the second medical year.

"While 214 fewer freshmen were enrolled in 1937-1938 than in 1935-1936, there were also 149 fewer students who had discontiuued their course by the end of the second year."

As to the number of American citizens studying medicine iu faculties of medicine abroad, the report points out that "in the spring of 1939, according to iucomplete official reports, there were at least 500 at that time in Europe, studying principally iu the extramural medical schools of Scotland. Completion of the professional educatiou of these students was interrupted by the decision of the State Department to discontinue visas of passports to combat areas. Many of these applied to American schools for either advanced credit or admission to the entering class of 1939-1940, with little success. The medical schools of the United States already have many more applicants for admission than they can possibly admit and at the time these students were seeking entrance the classes had already been filled to capacity."

The report points out that at a conference in March 1940 the State Department agreed that for the present at least it would issue visas for Switzerland for the students who wish to contiuue their studies in that country. It was estimated that about 100 of the group will avail themselves of this possibility.

"With the movement of events in Europe in recent months," the Council says, "it is quite evident that it will be impossible for students from this country to obtaiu a medical education in Europe in the near future."

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*NOTE:—References on Sulfocyanate in Hypertension.

(1) Nichols, J. B. "The Pharmacologic and Therapeutic properties of the Sulphocyanates," Am. J. M. Sc. 170:735 Nov. 1925.

(2) Gager, L. T. "The Incidence and Management of Hypertension," J. Am. Med. Assn. 90:82 Jan. 14, 1928.

(3) Smith, A. G. and Rudolf, R. D., "The Use of Sulphocyanate of Soda in High Blood Pressure," Can. Med. Assn. J. 19:288 Sept. 1928.

(4) A. M. A. J. ab-616, Aug. 12, 1939.

(5) A. M. A. J. ab-525, Feb. 10, 1940.

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been neglected by organized medicine and other directly interested agencies is shown by the Council's report that for 1939-1940 forty-one states and the District of Columbia provided a form of continuation study for physicians and, when clinical conferences were included. forty-four states and the District of Columbia offered graduate opportunities.

"Forty-one itinerant courses of continuation study for practicing physicians were offered in or near the home communities of physicians in thirty-one states," the Council reports. "State medical societies sponsored the majority, with state boards of health as well as extension divisions of universities and medical schools as joint sponsors in many states.

"According to reports received, the approximate attendance at courses of an itinerant nature, clinical courses and graduate assemblies totaled 52,012. The individual registration of these groups in the order named was 20,213, 15,399 and 16,400."

That opportunities for continuation study for Negro physicians are not being neglected is evidenced by the fact that ten states and the District of Columbia offered courses for Negro physicians. Attendance ranged from eleven to 204, the median being thirty-two.

Another aspect of the opportunities for continuation study is shown in the report that a total of 208 organizations held scientific sessions of value to practicing physicians during 1939-1940. Not the least of these was the scientific program of the American Medical Association.

The Council's report also contains a detailed list of the 732 hospitals approved by it for training interns. These instiutions have a total of 6,791 internships with a capacity of 244,257 beds. In addition there are listed the 587 hospitals with approved residencies and fellowships. The residencies total 4,392 and the fellowships 726.

Census Bureau Makes Fatal Accident Report

In a statistical study of fatal accidents in the six years 1933 to 1938 recently released by the U. S. Bureau of the Census, the report is shown that in 1933 fatalities from accidents totaled 90,932 and thereafter the number increased to a high point of 110,052 in 1936. Then it decreased to 93,805 in 1938.

Special emphasis was placed on deaths caused by fires, which ranked seventh among all accidental causes from 1933 to 1938 and advanced to sixth place in 1938. Figures for the years in succession were 1,521 in 1933, 1,752 in 1934, 1,581 in 1935, 1,913 in 1936, 1,688 in 1937 and 1,650 in 1938. Fire claimed more victims in the age group 5 to 9 than in any other group in 1938; there were 129 deaths in this group, which was 7.8 per cent of all persons burned to death. The next largest number was in the group 50 to 54, with 109 deaths.

Age distributions for different types of fatal accidents vary greatly, the report showed. Only 18.3 per cent of deaths from injury by fall occurred among persons under 45 years of age, who constitute 77 per cent of the population; but 55.8 per cent of the automobile fatalities and 91.3 per cent of the air transportation accidents were in this younger group.

Anesthesiology Board Increases Fees

Because of increased administrative expenses, it has been necessary to increase the application and administrative fees of the American Board of Anesthesiology, it has been announced. The new fees are $25 with application and $50 before examination. In case of rejection, all fees paid will be refunded except a $10 filing fee (before full examination).

The new fees go into effect January 1, 1941. If application is filed before that time, the rate of $50 ($5 for registration, not returnable, and $45 examination fee) still applies, according to Dr. Paul M. Wood, 745 Fifth Avenue, room 1503, New York, secretary.

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SIMPLE DIETARY METHOD OF TREATING INFANTS' DIARRHEA REPORTED

A simple and highly nntritions dietary method of treating diarrhea of the newborn infant with pectin-agar, which also is adaptable for home use in treating older infants and children, is described by Philip J. Howard, M.D., Detroit, and Charles A. Tompkins, M.D., Omaha, in The Journal of the American Medical Association. The beneficial results of such treatment of seventy-three children are reported.

Pectin is the congealing or jellying carbohydrate snbstance of apple sugar, and agar is an indigestible solidifying gelatin-like carbohydrate found in milk sugar, certain seaweeds, beet sugar and some gums.

Pectin-agar is added to the child's formula. It is made by cooking a solnble prepared powder in milk or other suitable liqnid. The composite action of this high carbohydrate food results in an easily digested, nutritious food which mechanically produces formed stools, favors normal intestinal action, absorbs bacteria with their toxins (poison wastes), systemically combats acidosis, protein destruction and water loss, chemically combines with certain bacterial toxins and body wastes, and locally promotes healing.

"The treatment of diarrhea at any age," the authors explain, "consisting of limiting all intake to the pectin-agar formula and water until the stools are formed. The result is good whether large or small amonnts are taken, the bulk of the stool depending on the intake. The older infants and children are allowed as much of the food as desired. After the bowel movements are free from blood, pus and mucus and are formed, the best practice with nnrslings is gradually to replace the pectin-agar calories by calories from milk and added carbohydrate."

In discnssing the results of the pectin-agar treatment of twenty-three newborn infants Drs. Howard and Tompkins state: "All infants treated had soft stools within forty-eight hours. The number of days until all liquid stools become soft and normal appearing was 4.7 with standard feedings as contrasted with 1.6 days with pectin-agar.

"Approximately fifty infants and children with bacillary dysentery (an infectious diarrhea caused by certain bacteria) and other types of diarrhea have been treated in the home with gratifying results."

Bloodletting For Hemophiliac Patients

Bloodletting from a vein (venesection) kept a hemophiliac patient or hereditary bleeder free of symptoms for seven years, George B. Lawson, M.D., Roanoke, Va., and A. B. Graybeal, M.D., Marion, Va., report in a recent issne of The Journal of the Ameciran Medical Association.

The patient was completely incapacitated becanse of joint symptoms (pain and swelling), nervousness and apprehension that occurred with the bleeding. Venesection, abont once every six weeks, at the onset of symptoms kept the patient rather well for the seven years, except for discomfort in one knee. An x-ray of this knee showed cysts in the region of the knee cap and thigh bone.

The patient died abont seven and a half years after the first venesection. The cause of death was reported as being due to "massive hemorrhage below the chin and contributory cerebral swelling brought about by an abnormal collection of fluid."

Pan American Tuberculosis Congress Set

The Fifth Pan American Congress on Tnberculosis will be held nnder the auspices of the Latin American Union of Tuberculosis Societies in Bnenos Aires, October 13-15, and in Cordoba, October 16-17.

Official subjects for discussion will be the tuberculosis index of South American conntries, heredity and contagion in tuberculosis, and the lungs in extrathoracic forms of tuberculosis. Each member nation of the union will have an official speaker on each subject.

SULFANILAMIDE USED IN TREATING HEART INFLAMMATION CASE

What he terms a "cure" and not a remission of a proved case of subacute bacterial endocarditis (inflammation of the membrane lining the heart) which was treated with sulfanilamide is reported in The Jonrnal of the American Medical Association by Jacob Heyman, M.D., Newark, N. J.

In view of the fact that the disease is almost invariably fatal, and since attempts at specific treatment have thus far proved discouraging, a description of this case is warranted, Dr. Heyman believes.

The patient had suffered for quite some time, had lost 40 pounds of weight and complained of headaches, fever, lassitude, severe pains, difficult and labored breathing and sweating accompanied by chills. Streptococcus viridans, the green-prodncing organism, was isolated in the blood. Blood transfusion in addition to the usual treatment was of no avail. The patient left the hospital against advice but soon after recalled her physician, Dr. Heyman, and was put on small doses of sulfanilamide, which were continued for six months with steady improvement.

In attempting to establish the case as a cure Dr. Heyman explains: "Although remissions of varying degree occur in subacute bacterial endocarditis, a review of the case here reported would serve to demonstrate that this represents a cure rather than a remission. The striking change in a patient weighing 63 pounds, who now weighs 109 pounds and has been free from symptoms and fever for fifteen months, speaks against the possibility of a remission.

"Qualified observers have expressed disconragement over the use of sulfanilamide in subacnte bacterial endocarditis. Such extreme pessimism seems premature, since the possible schemes of treatment with this group of chemicals have not all been exhausted.

"Cases of spontaneous recovery have been reported. The favorable response of this patient to snlfanilamide may have been merely coincidental. Yet, if this is attributed to coincidence, it leaves unexplained the recurrence of fever and symptoms when sulfanilamide was apparently discontinued too soon and their disappearance when the drug was resumed.

"The treatment of subacute bacterial endocarditis with sulfanilamide or its derivatives should not be hastily abandoned if resnlts are not immediate; on the contrary, it shonld be continued persistently so long as the drng is tolerated."

Some Nerve Diseases Are Merely Symptoms

Some diseases of the outer sensory nerves resulting in snch conditions as abnormal sensations are merely symptoms of more basic disorders affecting the blood vessels supplying the involved nerves, J. L. Fetterman, M.D., and D. K. Spitler, M.D., Cleveland, state in a recent issue of The Journal of the American Medical Association.

Some of these basic conditions are due to injuries following drug injections, blood clots in a vein, hardening of the arteries, diabetes, gangrene of a vein or artery, changes in the arteries brought about by syphilis, and inflammatory disorders of the arteries. All of them may reduce the supply of blood to the affected nerves and result in snch nerve symptoms as burning sensations of the skin, shooting pains, excruciating muscular pains, areas of numbness or oversensitivity, and paralysis or weakness of the involved part of the body.

The authors point out that the local symptoms in each case depend on the nerve involved, the extent to which the disease has altered the involved site and the general statns of the individual.

In view of this the two men declare that treatment should be directed toward eradicating the original disorder as well as providing relief of the local symptoms produced by the involved nerves.

ABSTRACTS : REVIEWS : COMMENTS and CORRESPONDENCE

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments From
LeRoy Long Clinic
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"The Function of the Vertebral Veins and Their Role In the Spread of Metastases." By Oscar V. Batson, M.A., M.D.,; Philadelphia, Pennsylvania; Annals of Surgery, July 1940, Volume 112, No. 1, Page 138.

There are many metastatic tumors and abscesses that do not fit readily into the accepted explanations for tumor spread. The absence of lung involvement has been a constant stumbling block to current theories. Even an open foramen ovale has been used to explain metastatic paradoxes.

A certain peculiar distribution of bone lesions in the pelvis are pathognomonic of carcinoma of the prostate, and yet an adequate explanation for this typical and peculiar distribution of bone lesions has not yet been made. The pattern is not that of nerve sheaths or of lymph vessel distribution. The only anatomic system into which the pattern fits is the system of veins which invests the sacrum, the lumbar spine, and wings of the ilia.

Dr. Batson has done some ingenious experiments on cadavers and living monkeys to demonstrate the architecture of this plexus of veins.

By injecting the dorsal vein of the penis of a cadaver with a radiopaque material and followng the course of the fluid under the fluoroscope he was surprised to find that none of the material reached the inferior vena cava, but instead spread out in the veins in and about the sacrum. Further injection caused the material to progress up the spine and into the cranial cavity. Many intercostal veins were filled in the process. This specimen furnished a composite picture of the metastatic pattern of advanced cases of carcinomatosis with primary origin in the prostate.

The experimentation was next carried over to live monkeys with similar results, when pressure was applied to the abdomen to stimulate conditions of increased intra-abdominal pressure such as produced by coughing, sneezing or straining.

Breast tumors also give rise to paradoxic metastases, so a small vein of the breast of a female cadaver was injected with the radiopaque fluid. The material was found in the clavicle, intercostal vein, head of the humerus, cervical vertebrae, and in the cranium. These injections parallel the spread of the so-called aberrant metastases from the breast.

In another female cadaver, an injection was made in a vein just lateral to the arcola. The first 15 cc. of material spread entirely into the adjacent subcutaneous tissue. The skin surrounding the site of injection flushed and the flush gradually extended past the midline. Only after the injection of 15 cc. did the fluid pass into the intercostal and vertebral veins. This would indicate that Handley's lymphatic permeation theory, even as it concerns the skin, might be restudied with profit. Possibly both lymphatic and venules are concerned in tumor spread in skin.

Dr. Batson proposes that in addition to the recognized system of veins, the pulmonary, the caval and the portal, because of its anatomic structure, its physiologic and its pathologic importance, we add, as a fourth, the vertebral system of veins. According to this concept, in every act of straining, coughing, or lifting with the upper extremity, the blood is not only prevented from entering the thoracico-abdominal cavity, it is actually squeezed out of the cavity. Tumors and abscesses of the thoracico-abdominal wall, including the breast, tumors of the lung, pelvic tumors and abscesses, lesions of the shoulder and pelvic girdle, and occasionally tumors and abscesses of other organs have connections with this vein system and may therefore, have metastases distributed anywhere along the system without involving the portal, the pulmonary or the caval system.

This contribution, made by a very able and ingenious anatomist, offers a logical and plausible explanation for the presence of metastatic lesions that we have all seen but have had difficulty in understanding.

We feel that Dr. Batson will long be remembered for this very original explanation for the spread of tumors.

Warren Poole.

"Cholecystojejunostomy As Opposed To Cholecystoduodenostomy or Cholecystogastrostomy." By Frank H. Lahey, M.D., F.A.C.S., Boston, Massachusetts; Surgery Gynecology and Obstetrics, Volume 71, Number 1, July, 1940, Page 73.

In this article the distinguished author advocates cholecystojejunostomy, rather than cholecystoduodenostomy or cholecystogastrostomy, when it seems advisable to provide a new exit for the bile in the case of a patient who has an obstruction of the lower end of the common duct resulting from such pathology as neoplasm of the head of the pancreas. The author says, "Some years ago, in patients with obstructive jaundice due to carcinoma of the head of the pancreas or at the ampulla of Vater, I began the practice of anastomosing the gall bladder to the jejunum which was brought up over the colon at the hepatic flexure instead of performing cholecystogastrostomy or cholecystoduodenostomy. This procedure has now been employed in a sufficient number of cases and over a sufficiently long period of time not only by myself but by the other surgeons in the clinic so that it may safely be presented as a method of sidetracking the bile from above the duct obstructed by malignancy into the intestinal tract. It is, at least in our hands, an operation which is easier to perform and one which is safer from the point of view of leakage than is anastomosis of the gall bladder to the stomach or anastomosis of the gall bladder to the duodenum."

Attention is directed to "an undesirable disproportion in the character of the thin-walled distended gall bladder and the thick-walled stomach with its heavy mucous rugae at that portion of the stomach just proximal to the pylorus." There is a statement, which is a representation of the experience of surgeons generally, that when an anastomosis is done between gall bladder and stomach the stomach tolerates the bile very well. However, there is a reference to the observation made at operation upon patients later that sometimes gastric contents were found in the gall bladder, and even in the contiguous ducts.

It is indicated that an objection to anastomosing the gall bladder to the duodenum is that there may be leakage, "because of its technical difficulties." This difficulty is understood when one contemplates the making of a water tight connection between the gall bladder and the duodenum, the explanation being that the duodenum is, practically, a fixed structure, while the gall bladder and the adjacent liver to which it is attached are movable structures. This difficulty becomes enhanced when there is vomiting after the operation.

But the author indicates an additional and greater difficulty when, because of a "deeply situated duodenum and with an overhanging right lobe of the liver," there is difficulty in properly placing the anastomotic sutures.

In support of his thesis, the statement is made, "If the jejunum is anastomosed to the gall bladder in place of either the stomach or duodenum, all of the disadvantages mentioned are largely avoided." The following statement indicates the technique: "With a long loop of jejunum pulled up in front of the colon at the hepatic flexure and the distended gall bladder emptied of its bile by a suction trocar, the two lax viscera can be dealt with at the level of the abdominal wall and a very accurate suture line completed around the opening in the gall bladder and the jejunum. Following the anastomosis the attached jejunum may be so rotated that the back as well as the front suture line may be inspected and reinforced if there is any evidence of sutures cutting out in friable gall bladders."

It is advised that, after the anastomosis is completed, a separate stitch be passed through a point just outside the fundus of the anastomosed gall bladder where the peritoneal coat of the gall bladder spreads out over the under surface of the liver. This stitch, then, catches the jejunum just beyond the point where that structure is anastomosed to the gall bladder.

It is advised that a similar suture be placed on the opposite side between the jejunum and this fold of peritoneum "where it passes off the gall-bladder wall." By this maneuver the jejunum is fixed to the liver and all tension on the suture line by the weight of the antecolic jejunum is removed. The jejunum being fixed to the liver by these two suspension sutures it ascends and descends freely with that structure.

Finally, the author reports that they have had several patients with carcinoma of the head of the pancreas alive two and three years following the operation above described.

LeRoy Long, Sr.

"Appendicitis Among Individuals More Than Sixty Years of Age." By Leonard K. Stalker, M.D., Rochester, Minnesota;—Surgery Gynecology and Obstetrics—July, 1940, Volume 71, Number 1, Page 54.

The author begins this very important article by the statement, "The greatest mortality for acute appendicitis occurs in patients more than 60 years of age," and it is indicated that it is the conclusion of the author that the mortality in this group of patients may be attributed to the fact that the diagnosis is frequently overlooked or delayed because of the patient's age and because of the mildness and variability of the symptoms.

Attention is directed to the frequency of appendicitis in this age group, the statement being made that approximately one to two per cent of all patients with acute appendicitis are more than 60 years of age. Statistics are presented to support this statement.

A question of the most vital importance is the mortality in this age group, which appears to be around 25 per cent.

The average pathological picture has been described by Taylor, of the London Hospital, as follows: "The almost constant course of acute appendicitis in old people is therefore — the first day, engorgement; second day, gangrene and local peritonitis; third day, perforation with general peritonitis or abscess formation; fourth day and after, abscess." The author remarks, "This is the pathological picture as described by others and as seen at the Mayo Clinic." At the same time, he directs attention to the statements of most writers that the cliuical picture in this age group, at the beginning, is atypical, and he indicates that one of the most atypical characteristics in the early period of appendicitis in the patient over 60 years of age is "mildness of symptoms."

Taylor (London Hospital) is again quoted to the effect that "In the majority of the 110 patients seen by Taylor in whom appendectomy was performed, the appendix was gangrenous and peritonitis was frequeutly present. Abscess formation had taken place in a large group and only drainage was instituted." In another series to which the author refers, 55 per cent had appendiceal abscesses, 9 per cent general peritonitis, and 16 per cent gangrenous appendicitis.

The author discusses the cases of 82 patients observed in the Mayo Clinic from 1924 through 1938. There were 33 women and 49 men. The average age was 65.1 years. These 82 patients were treated by operation. In 51 out of the 82 there were ruptures of the appendix. In these patients with rupture the operation consisted in simple drainage, but in the remaining 31 out of the 82 where there were no evideuces of rupture an appendectomy was performed in each case. A little later on in the article the author says that in 5 of the 51 patients with rupture of the appendix there was conservative, non-operative treatment. That statement was made quite definitely in discussing the treatment, but, for the moment, I overlooked it.

In the entire series of 82 patients there were 13 deaths, being a mortality percentage of 15.9 per cent. Nine of the deaths occurred in the series in which the appendix was ruptured, 8 being due to general peritonitis and one to pneumonia. Five of the 9 deaths occurred in that group in which appendectomy had been performed, and there were two deaths in each of the other two groups—"namely, those having simple drainage and those receiving conservative, non-operative treatment. In the series of 31 cases without rupture there were four deaths of which two were due to pneumonia, one to cardiac failure, and one to pulmonary embolism."

Where operation was done, about half had spinal anesthesia, and about half general gas—ether anesthesia. It did not appear that the type of anesthetic had any influence on the mortality rate.

"The pathological picture in relation to the time element is interesting in these two groups. In the 31 cases in which the appendix was unruptured there were 17 cases with gangrenous appendix while the 14 remaining showed varying degrees of acute purulent appendicitis. Of this entire group there were 20 cases in which the disease was of less than 24 hours' duration, 8 cases of less than 48 hours' duration. The history was considered atypical in 20 of the 31 cases of this group."

"In the series of 51 cases in which the appendix was ruptured there were only 17 cases in which the disease was of 48 hours' duration or less. In several instances it had been present several days to even a few weeks before the first examination at the clinic. There were 29 patients with general peritonitis, 11 with abscess formation, seven with gangrenous appendix and some degree of localizing peritonitis, and four in whose cases the pathological condition was not described. The history in at least 30 of these 51 cases in this group can be considered as atypical."

One of the most important observations was that the clinical syndrome of acute appendicitis in all the patients in this group was entirely different from that of those in younger individuals. At least 50 of the patients presented atypical symptomalogy when compared with the ordinary textbook description of acute appendicitis. In this large group of cases there was an absence of the ordinary sequence of symptoms and signs, such as initial epigastric distress, then pain in the lower right quadrant, nausea, vomiting, etc. The conclusion of the author is that the ordinary clinical syndrome may be present in the case of the elderly patient, "but it occurs sufficiently infrequently that it might be called the atypical picture of acute appendicitis in patients more than 60 years of age."

"In these patients, as has been mentioned, a characteristic attack of appendicitis may develop, but there seems more likely to be lower abdominal pain with localization over McBurney's point, leucocytosis, but frequently no fever, nausea, or vomiting. These findings may be all that is present for two or three days, or even

a week, before more toxic symptoms develop. The more severe symptoms which then appear are usually those of either localized or diffuse peritonitis.''

''In the majority of instances the patient has a rather mild cramp-like, intermittent type of general lower abdominal pain. This is associated with a mild indescribable dyspepsia and constipation. The pain is usually considered as being due to constipation and a cathartic or an enema is taken. This pain tends to localize in the right lower quadrant of the abdomen and tenderness develops over McBurney's point. If a leucocyte count is made it is found to be elevated to between 9,000 and 15,000 in each cubic millimeter of blood. Occasionally the pain begins as a dull ache at McBurney's point and remains localized. Anorexia and, in a few instances, some degree of nausea are present. There is usually no vomiting, but occasionally the patient vomits once or twice in the early phases. However, this has subsided completely by the time the patient is seen. There is very little, if any, constitutional disturbance and the amount of pyrexia, if any is present, is small.''

As the symptoms progress, there may be cramp-like pains which become more and more severe, and at the same time there may be distention. The symptomatology develops in such an insidious way that, taking into consideration the age of the patient, there may be a provisional diagnosis of intestinal obstruction due to malignancy of the colon.

''Thus, early in appendicitis in this age group there develops a lower abdominal cramp-like pain with localization at McBurney's point, tenderness in this region, and leucocytosis. In spite of the fact that within the next 48 hours the appendix usually becomes gangrenous and subsequently ruptures, the symptoms are still not acute enough for the patients to seek medical aid. Thus the majority of our patients had peritonitis and it was because of the symptoms of this peritonitis that they sought aid. As the appendix becomes gangreuous and peritonitis develops the picture resembling intestinal obstruction becomes even more apparent and frequently when patients are admitted at this phase, much valuable time has been lost in an attempt to locate a suspected neoplasm. As peritonitis devolops, more symptoms of toxicity manifest themselves and the patient may have consideable vomiting and fever. However, other patients remain ambulatory throughout the entire course of their illness and come because a mass has developed in the right lower quadrant of the abdomen. This mass has usually proved to be an abscess.''

In connection with this important article there are a number of enlightening case reports but they will not be repeated here.

The treatment of this type of appendicitis in the aged is approached with care and circumspection, and in this connection the author makes a very lucid and valuable statement: ''It must be said in this regard that elderly people seem to be able to make one effort to limit the peritonitis by adhesions, but if these are broken down the pus will spread, even though the source of infection is removed.''

Comments: In analyzing this article, I have taken the liberty to make several verbatim quotations. These quotations are made because they are regarded as being valuable.

The average general surgeon who approaches his work with a proper conception of the responsibilities involved has known for a long time that appendicitis in the aged, as far as the early symptomatology is concerned, is distinctly different from that in younger patients. However, I am afraid that this conception of the situation is not generally known and practiced.

The author does not take the position that patients should not have the advantage of surgical operation. On the other hand, he indicates in a very distinct way that under proper circumstances operation should be done. After a careful reading of the article one is impressed with the value of wise discrimination, based upon knowledge, wisdom and good judgment.

LeRoy Long, Sr.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
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"The Biochemistry of the Lens: A Resume." James E. Lebensohn, M.D., Ph.D., Chicago. The American Journal of Ophthalmology, July, 1940.

This is an attempt to sift, summarize and interpret the significant data concerning the chemistry of the crystalline lens. The author again reminds us that the lens consists roughly of one-third protein and two-thirds water. The lens depends entirely on the aqueous for its metabolic interchange. The specific gravity of the leus slowly increases (1.113 at the age of 90). With age there is also an increase of protein and lipid with a proportional loss of water. The lens capsule and experimental cataract are discussed.

The author's therapeutic conclusions are as follows: Misconceptions in the medical management of cataract readily arise from overattention to secondary detalls. If the primary failure iu senile cataract is in the glycolytic mechanism, it avails not to shift the acid-base balance of the diet, nor to administer cysteine, calcium, or potassium. Vitamin depletion must also be classed among incidental manifestations since cataract is not a characteristic accompaniment of xerophthalmia, beriberi, pellagra, or scnrvy. Prophylaxis holds a far brighter prospect than cnre. The picture of lamellar cataract illustrates that though this complication of rickets with tetany can be arrested by vitamin D and dietic adjustment the treatment cannot erase whatever cellular degeneration has occurred.

In treating incipient cataract, some physicians endeavor to improve the nutrition of the lens by iucreasing the permeability of the blood-aqueous barrier through various irritants applied by instillation or by subconjunctival injection. The value of such therapy is theoretically questionable since the metabolic capacity of the lens is limited and the increased permeability withdraws cevitamic acid from the lens and so lessens its reduction power.

The majority of cataracts are of systemic origin, but one eye is often affected while the companion eye is still healthy. If that lens could be kept trausparent, the patient would be well content. ''One eye is a necessity, two eyes a luxury.'' It is an encouraging thought that any medicament that can enter the aqueous will diffuse into the lens. The lens could be treated, if we only understood what to use. This we do know, that lental health like mental health depends on the state of the body. ''Lens sana in corpore sano.'' With our present insight what more can be done than improve the patient's general health, remove focal infections, and correct dietetic and hygienic errors?

"The Treatment of Corneal Ulcers." Mason Baird, M.D., and Grady E. Clay, M.D. Atlanta, Georgia. The Southern Medical Journal, April, 1940.

There are three sources of corneal infection meutioned, i. e.; (1) trauma or foreign bodies, that is, exogenous, (2) systemic or endogenous, and (3) by spread from adjacent ocular tissues. The coruea is very resistant to bacterial invasion, it being thought that only gonococcus and diphtheria are capable of penetration and ulceration. Introduction of bacteria by meaus of trauma is classical of the exogenous class; the spread of disease from adjacent ocular tissues is well shown with phlyctenular and superficial keratitis; the tubercle is representative of the endogenous group. There is a discussion given as to the clinical progress of the ulceration.

The author feels that many ulcers are overtreated, that more damage is done in this manner than by undertreatment. Where the continuity of the snrface of the cornea is broken. as in corneal ulcers or any type of keratitis, a pad should be used for protection, removing as necessary

for cleansing and medicatiou. Under general treatment the teeth seem to be the greatest offenders. However all possible foci of infection should be checked including tonsils, sinuses, intestinal tract, etc. The author uses some form of foreign protein in all cases. He has noted startling results in cases of kerato-conjunctivitis from the use of Vitamin A alone with no other local treatment than saline irrigations aud a pad. The author has not had the good results claimed by others with sulfanilamide except in ophthalmia neonatorum. In these cases the duration is cut to about seven days. In addtion to the sulfanilamide he uses five per cent mercurochrome three times daily and cleansing as necessary. In the author's experience of the past six years he feels that x-ray is the most valuable single item in the treatment of all bacterially infected corneal ulcers. Periodic checks with the slit lamp have failed to reveal any lenticular change. 80 to 100 r of unfiltered x-ray, given at about 8 inches distance, at intervals of three to five days, for a total of four to six treatments, seem to prove most effective. The relief of the pain is often dramatic.

The author reports six cases of the relatively rare filamentary keratitis. Pathologically this is quite similar to xerophthalmia. Oral use of Vitamin A is effective.

Superficial punctate keratitis is treated with atropine, early padding, and sometimes alcohol and iodine. Vitamin A is also giveu orally. The dendritic ulcer is the herpes simplex of the cornea. He mentions one case where the entire corneal epithelium was removed and the alcoholic iodine solution applied four times and the eye healing wthout a nebula.

Phlyctenular kerato-conjunctivitis, usually a disease of childhood, is treated locally and generally. A diet high in protein and low iu carbohydrate with some 30,000 units of Vitamin A daily is recommended. Calomel powder and atropine locally are effective. Two or three doses of x-ray will relieve the photophobia and blepharospasm.

The pneumococcic ulcer is one of the most serious. The author claims his most spectacular results with the x-ray in this type of infection. Atropine, cleansing and padding are used in addition.

Rosacea keratitis or kerato-conjunctivitis is treated by taking care of the facial lesions; if there is active ulceration, atropine, cleansing and pad are used. This is continued until there is no staining. If the lids are much thickened, the Meibomian secretions are expressed and 1 per cent silver nitrate applied occasionally. X-ray is also used. 40,000 units of Vitamin A are given daily for six to eight weeks.

An interesting discussiou of the paper by several leading authorities is appended.

"Sympathetic Ophthalmia." Rodman Irvine, M. D. Los Angeles. Archives of Ophthalmology, July, 1940.

This is a clinical review of sixty-three cases recorded at the Massachusetts Eye and Ear Infirmary between the years of 1922 and 1935. It is an interesting and instructive recapitulation that does not lend itself well to abstracting. Several page length detail tables are enclosed in the report. The method of closure of the wound to possibly prevent subsequent sympathetic ophthalmia is as follows: Closure of the scleral or corneal edges with interrupted sutures, using 0.0025 black slik (Deknatel) and a 10 mm. Kalt corneal one-half circle needle; the attempt is made to make intracorneal or intrascleral sutures but no harm is done if the sutures are placed through and through. The author does not consider the closure satisfactory unless the anterior chamber can be filled with air after tying of the sutures. The air helps to prevent the formation of anterior synechiae.

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The author's own conclusions and summary is as follows:

In this series there is no instance of sympathetic ophthalmia developing without perforation of the globe.

If enucleation is to prevent the development of sympathetic uveitis, it must be done before two weeks have elapsed from the time of injury. Once sympathetic uveitis has developed, enucleation of the exciting eye has no effect on the course of the disease, and this eye should be retained, if potentially useful, as it may eventually be the better eye. From the available data there is no indication that the exciting eye acts as a focus of infection "spilling over" into the sympathizing eye.

Considering the frequency of the occurrence of sympathetic ophthalmia, one per cent of all perforating injuries, attempts to save severely damaged eyes, especially if the lens is injured, are not justified if the fellow eye is normal. A distinct possibility of sympathetic uveitis must be considered when operation is contemplated on eyes nearly blind from any cause, as for instance, hemorrhagic glaucoma.

"The progression of symptoms in the course of the disease may be of diagnostic importance: (a) The exciting eye is always irritable at the onset of symptoms in the sympathizing eye. (b) Keratic precipitates are nearly always present in the sympathizing eye and make their appearance in this eye before they appear in the exciting eye. Uveitis developing about six weeks after injury or operation to the fellow eye, showing at the onset no keratic precipitates, has about a 10:1 probability of not being sympathetic uveitis.

The wounds exciting sympathetic uveitis, whether traumatic or operative, characteristically show incarcerated lens substance or uveal tissue. This fact and the incidence of the condition after various types of operations suggest that iris inclusion operations are more likely to cause complications with sympathetic uveitis than trephine operations; they further suggest that repair of perforating injuries should include freeing the wound of incarcerated substance and firmly uniting the tunica fibrosa.

CARDIOLOGY

Edited by F. Redding Hood, M. D.
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"Examination of the Heart."—American Heart Association.

The following article is the second part of a pamphlet published by the American Heart Association under the direction of Howard B. Sprague, M.D., with the assistance of Harold E. B. Pardee, M.D., Samuel B. Scholz, M.D., and Harry E. Ungerleider, M.D.

CARDIAC MURMURS

As in the appraisal of heart sounds, so in the study of heart murmurs, the examination is best started at the base of the heart. Here, usually, the second sound can be placed with great accuracy, and the timing of murmurs elsewhere can be decided by gradually moving the stethoscope toward the apex. The absence of murmurs in the heart should be decided only after listening to all the valve regions with the naked ear and with both the bell and the diaphragm chest piece of the stethoscope. The characteristics of these instruments are such that the bell may fail to transmit satisfactorily the high-pitched blowing murmurs, and the diaphragm, the low-pitched murmurs.

SYSTOLIC MURMURS

Murmurs occurring during systole are, without doubt, more difficult to assess than those occurring in diastole. It is of great importance to determine the point of maximal intensity of such murmurs because this is one way by which we can decide upon their relative importance. Since the most common murmur to be heard in the heart is the systolic murmur over the pulmonary valve area in the second interspace to the left of the sternum, it is well to listen in this area first to see whether or not a systolic murmur is present. This murmur may be transmitted to other parts of the precordium. It is usually a normal physiological phenomenon caused by the blood rushing into the distensible pulmonary artery which is in relatively close apposition to the chest wall, particularly at expiration. This murmur will change considerably with change of position of the patient from upright to recumbent and will be decreased and often completely removed by full inspiration. Such a murmur, as a solitary finding in the heart, is almost always of no importance, and yet it is often wrongly regarded with suspicion.

Another extremely common systolic murmur, heard over the precordium, is the cardio-respiratory murmur. This is due to air rushing into the lungs at the time when the heart contracts, or to displacement of air within the lung. This murmur also varies considerably with change of position and with respiratory phases. A useful method of deciding about this murmur is to have the patient breathe slowly and deeply in and out. At some point in the respiratory cycle, the murmur will often disappear completely. This point is not necessarily in either full inspiration or expiration but often at an intermediate position.

Systolic murmurs at the apex of the heart are not uncommon, as a normal phenomenon, in young patients. However, before such murmurs can be considered unimportant, it must be shown that they are of a blowing quality, that they are not associated with cardiac enlargement, and that they are not constant from day to day and with different positions of the patient. Most of the innocent apical systolic murmurs, except those found during the course of acute infection, are either cardio-respiratory or are transmitted from the pulmonary region.

Acute infections or other causes of ill health may temporarily produce apical systolic murmurs, probably by inducing slight cardiac dilation and increasing the speed of the blood flow. As it has been shown by sound tracings that certain usually inaudible vibrations are often present over the heart when the blood is ejected from the ventricles, it is not surprising that faint systolic murmurs can, at times, be heard in over-active normal hearts. They are variable in their localization from one examination to another, sometimes being apical, at other times heard over the whole precordium; they are sometimes localized to the left of the sternum, or to its lower portion. They are short and never harsh and may be mid-systolic in time.

Systolic murmurs of importance at the apex generally merge with the first heart sound and are rougher and more intense than the murmurs which have been mentioned. They usually signify mitral valve deformity but may be produced by other disease mechanisms. Systolic murmurs over the pulmonary valve region, if attended by a thrill, should be carefully studied. They are often associated with cyanosis and are due in such cases to a congenital heart lesion. Such murmurs indicate further study by X-ray and electrocardiographic techniques. Systolic murmurs over the aortic area should also be carefully considered. They are rarely physiological and usually mean dilation of the aorta or stenosis of the aortic valve. In the latter case there is diminution or absence of the aortic second sound and usually a systolic thrill. This can be felt best by palpating over the second and third right interspace, or above the clavicle, or in the suprasternal notch with the patient leaning forward at full expiration. A rare systolic murmur, which is sometimes heard all over the heart but loudest in the third left interspace, is the one associated with an interventricular septal defect. This is a very coarse murmur associated with a systolic thrill.

DIASTOLIC MURMURS

There are two diastolic murmurs of great importance.

One is the low-pitched, rumbling, mid and late diastolic murmur of mitral stenosis. It is heard best at the apex with the bell stethoscope and the patient iu the recumbeut or left lateral recumbent position. It is ofteu sharply localized and careful auscultation of the entire apical region should be carried out before deciding that this murmur is not present. Acceutuatiou of the first heart sound should always make us suspicious of the possibility of finding this murmur. Iu the early stages of mitral valve narrowing, the murmur starts a short time after the secoud souud and ceases shortly before the first sound. In older patieuts, the murmur usually coutinues, with a presystolic accentuation, into a sharp first sound.

The other murmur is a blowing early diastolic murmur usually heard best along the left sternal border directly after the second souud by the unaided ear or with the aid of the diaphragm type of chest piece. This aortic diastolic murmur is usually best heard with the patient leaniug slightly forward, in the erect positiou, holding the breath in full expiration. When the aortic regurgitation is greater, as is common in syphilitic aortic valve disease, this murmur may be very loud and heard with the patient in any position and all over the chest.

CONTINUOUS MURMURS

The only important continuous murmur is that of pateucy of the ductus arteriosus. It is heard with greatest intensity over the second or third left iuterspaces uear the sternum and is usually accompauied by a thrill. The systolic phase is louder but the murmur continues through the whole cardiac cycle with a blowing or harsh quality.

In some children a continuous humming murmur can be heard across the upper sternum due to the normal vibrations from the flow of blood in the great veins of the neck. The bell stethoscope lightly applied over the clavicle, with the child's head turued away from that side, will reveal a louder continuous hum in these cases and will thus locate the origin of the murmur heard distantly in the upper chest.

CARDIAC RHYTHMS

Cardiac Rhythms Not Usually Indicating Disease

The heart rate and rhythm in normal people often departs from the theoretical regular beating at a rate of 70-80. The commonest variations are these:

Tachycardia—Simple acceleration of the heart rate is often found duriug examinatiou of nervous individuals. It may be as fast as 160. The rate may slow gradually as nervousness decreases, or wheu the persou lies down. It often slows temporarily on forced expiration after a deep breath.

Bradycardia—A slow heart rate as low as fifty is not uncommonly fouud iu normal athletic people. It should not be considered as evidence of cardiac disease. Increase of the rate on exercise will prove that heart block is not present, as will speeding of the rate on inspiration and slowing on expiration.

Sinus Arrhythmia—This irregularity is the customary finding in young people and often in older age periods. It consists of a rhythmic iucrease in heart rate on inspiration and decrease on expiration. This relationship to breathing is diagnostic and can be demonstrated more obviously by slow forced respiration.

Premature Beats (Extrasystoles) — When a regular heart rhythm, or one with the irregularity just described, is momentarily interrupted by an early beat followed by a pause, a premature coutraction (extrasystole) has occurred. In most instances this is of no importance. The diagnosis of the condition should always be made by auscultation of the heart and not by taking the pulse. Frequent recurrence of the premature beat indicates the need for electro-cardiographic study, as this should arouse a suspicion of myocardial disease.

IMPORTANT DISTURBANCES OF THE HEART BEAT

Arrhythmias of serious importance are auricular fibrillation and heart block.

Auricular Fibrillation—This arrhythmia is marked by a heart beat which is continuously and completely irregular. It does not change its rate in relation to breathing nor is it a temporary interruption of a regular rhythm. The heart should be listened to for at least a minute because periods of apparent regularity may occur. Auricular fibrillation always calls for further study of the patient.

Heart Block—This is a rare arrhythmia. In its mildest form, diagnosable on physical examination, it is characterized by sudden cessation of all cardiac sounds for the duration of at least one heart cycle. It must always be diagnosed at the heart and not at the wrist. It should not be confused with a faint premature beat followed by a pause. Electrocardiographic study may be needed to confirm the diagnosis. When complete heart block is present, the heart rate is found to be between 30 and 40 in most cases. The rhythm is regular and normal acceleration on effort does not occur. Rates under 50 should be investigated electro-cardiographically.

QUESTIONABLE CARDIAC RHYTHMS

Other abnormal rhythms of the heart, usually characterized by continuously rapid rate (over 120) or by paroxysms of tachycardia, often require electrocardiographic interpretatiou and should be so investigated.

Examinatiou of the heart is never complete without a general physical examination. Much valuable information concerning the fuuctional state of the heart can be obtained by attention to other organs. Thus it should be au invariable procedure to listen for rales at the lung bases and to look for engorgement of the neck veins, eulargement of the liver, and evidences of edema. Careful determinatiou of the blood pressure should also be routinely carried out, preferably in both arms. In addition, observation should be made of the peripheral vessels, and of the retiual vessels with the ophthalmoscope.

Fiually, it must be recognized that severe organic heart disease may exist iu the complete absence of any findings on physical examination. This is particularly true in coronary artery disease. Therefore, when a cardiac lesion is suspected aud physical examination is iuconclusive, further study with special techniques, such as fluoroscopy, X-ray and electrocardiography is advisable before a final decision is made as to the presence or absence of organic heart disease, and the type and severity of lesion present.

INTERNAL MEDICINE

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"General Consideration of the Relationship of Hypertension to Renal Disease." N. M. Keith.

"Urographic Evidence of Renal Lesions in a Series of Patients Suffering From Essential Hypertension." R. O. Pearman, G. J. Thompson and E. V. Allen.

"The Relationship of Hypertension to Renal Neoplasm." B. T. Horton.

"Hypertension and Chronic Atrophic Pyelonephritis." N. W. Barker and Waltman Walters.

"Hypertension and the Surgical Kidney." W. F. Braasch, Waltman Walters and H. J. Hammer. Proceedings of the Staff Meetings of the Mayo Clinic, Wednesday, July 24, 1940, Volume 15, No. 30.

This is an extremely interesting and iustructive discussion of this most important problem. Dr. Keith in his introductory remarks, relative to general consideration of the relationship of hypertension to renal disease, points out certain historical high lights and admits that those and present informatiou are such that the field for further investigation of the subject is a very fertile one. He also states that there are many pathological and physiological causes for car-

diovascular renal disease and infers that primary kidney lesion may be the cause in a comparatively small percentage.

In the discussion of urographic evidences of renal lesions, R. O. Pearman found that in 500 cases of hypertension in which urographic studies were carried out there was evidence of renal disease in 205, or two-fifths of the cases, but comments to the effect that the co-existence of renal disease and hypertension does not indicate that the former condition necessarily causes the latter.

In connection with the relationship of hypertension to renal neoplasm by B. T. Horton, an interesting case is recited and the author comments that the presence of hypernephroma in hypertension with disappearance of the hypertension after removal of the tumor, and a recurrence of the hypertension with recurrence of the tumor certainly suggests a casual relationship. In his series of 325 cases of hypernephroma, 40 per cent of the men and 55 per cent of the women had hypertension. Of 57 patients who had hypertension, records obtained for 25 after nephrectomy showed that 11 had normal blood pressure and 14 still had hypertension. Therefore, no consistent alteration in the blood pressure followed nephrectomy. In short, his study failed to substantiate observations of previous investigators to the effect that a marked fall of hypertension followed removal of hypernephroma.

In the study of hypertension and chronic atrophic pyelonephritis N. W. Barker in a very short discussion emphasized the fact that among the large group of patients (12,000 cases) who had been at the Clinic with definite hypertension, the co-existence of definite chronic atrophic pyelonephritis is not common.

W. F. Braasch from the section of Urology, Waltman Walters of Surgery, and H. J. Hammer in Urology make several extremely interesting observations which briefly follow:

The incidence of hypertension in a group of 1,684 patients subjected to renal surgical operation was no higher than it was in a group of patients taken at random.

Hypertension was observed in 20.3 per cent of 793 cases operated for renal stone.

Hypertension was noted in approximately 14 per cent of cases of hydronephrosis without stone.

Hypertension was observed in 7.6 per cent of the 158 cases of renal tuberculosis.

Hypertension was found in 27.7 per cent of 137 cases operated for renal adenocarcinoma.

Many cases studied whose renal function was reduced had no hypertension.

Back pressure as a result of renal stasis usually is not a factor in hypertension unless acute bilateral obstruction is present.

The following concluding paragraph is to me a very significant one:

"Reduction in blood pressure may exist as long as a year or more after operation and yet hypertension may return. This can be explained on the ground that a toxic or irritant lesion has been eliminated and, when this influence has worn off, the underlying essential hypertension reasserts itself. In order to determine whether recovery after operation is permanent it is necessary to determine the patient's blood pressure for more than a year."

UROLOGY

Edited by D. W. Branham, M. D.
502 Medical Arts Building, Oklahoma City

"The Effect of Hormones On The Undescended Testis." J. S. Eisenstaedt, M.D. Max Appel, M.D. and Max Fraenkel, M.D. Chicago. American Medical Journal. July, 1940.

The authors' interest was first aroused when they operated on thirteen patients who had failed to respond to injections of anterior pituitary-like substance given by their physicians. The presence of fibrotic adhesions, the small size of the gland and other significant changes suggested to them that definite harm had been produced by administration of the hormone substances.

For the past two years they have been making clinical observations and performing clinical experimentation to see whether the use of such hormone preparation is actually of therapeutic value.

Their conclusions were: That careful evaluation of the position of the abnormally situated testes, which can be determined by painstaking examination, is necessary. The group of abnormally situated testes which will descend when they reach or approach adult size and weight are to be differentiated clinically from the group of true undescended and ectopic testes. True undescended and ectopic testes always require operative treatment for their correction. Retractile testes may descend spontaneously as late as the seventeenth year.

Gonadotropic substance has no value in the preoperative care of true undescended and ectopic testes. Its routine use in retractile testes is not recommended. Gonadotropic substance is definitely harmful in larger dosage to testes which have not reached the scrotum.

Operation was done in a series of seven clinical cases showing marked evidence of degeneration after the use of hormone. The surgical correction of the undescended testis after endocrine therapy is not facilitated, as claimed by others, but is rendered more difficult.

Comment: The indiscriminate use of gonadotropic substance in the treatment of undescended testicle is undoubtedly to be condemned. This is a significant article from individuals of wide experience. It is my opinion that such preparations are a "two edge sword" and their promiscuous administration in developing children may produce serious degenerative changes which only years will manifest itself as distressing disabilities of these structures.

"Observations Upon the Site of Action of Sulfapyridine In Gonorrhea." Reed M. Nesbit, M.D. Journal of Urology. August, 1940.

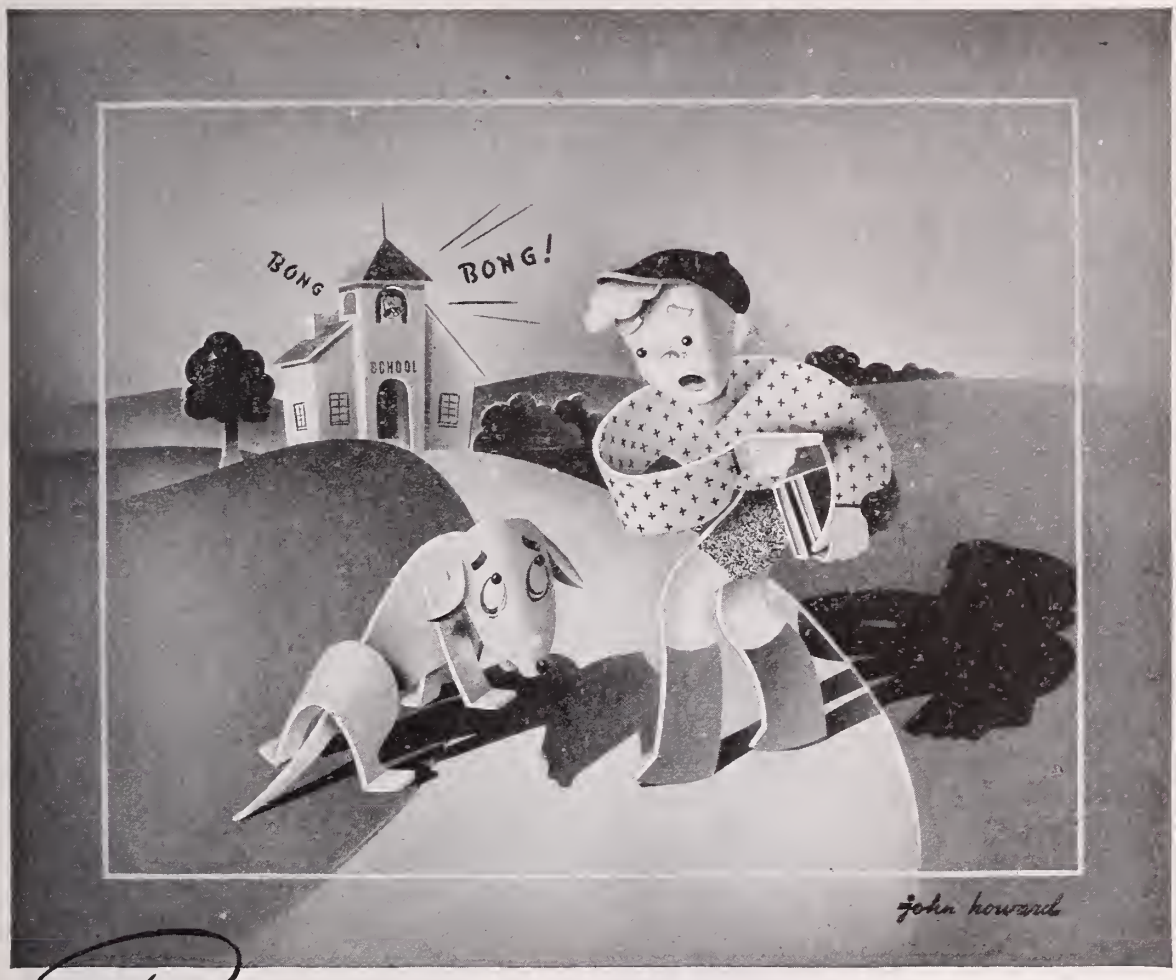
This is an interesting observation in view of the controversal discussion as to the exact mode of action of these preparations.

A patient whom two years previously had had his urine sidetracked by means of a bilateral ureterosigmoidostomy developed a gonococcal infection complicated by epididymitis. Despite the fact that no urine passed through the lower urinary tract the administration of sulfapyridine was followed by excellent results. The inference was that sulfapyridine produced its cure from tissue concentration rather than from the effects of its presence in the urine.

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Multiple Polyposis of Gastro-Intestinal Tract A Case Report*

FRED A. GLASS, M.D.
TULSA, OKLAHOMA

Multiple polyposis of the gastro-intestinal tract is regarded by most writers upon the subject as a familial disease with a rather marked tendency toward malignant degeneration. One or two polyps in an individual is not considered infrequent nor is it considered an inherited characteristic. On the other hand, true multiple polyposis where the polyps literally cover the mucous membrane is only encountered occasionally and is regarded as a familial condition. Multiple polyposis may be manifested early in life; but, some cases do not show any symptoms until late in life. Sex incidence is about equal.

Symptoms: Symptoms may be rather vague at the onset; and frequently the mildness of the symptoms in most cases are not severe enough to cause the individual to consult a physician. Frequency and looseness of the bowel movements are the outstanding symptoms and are usually associated with mild abdominal cramps. General malaise with bleeding occurring sporadically in some cases, rarely in others, depending on whether the polyps are sessile or whether there are some vascular pedunculated ones. Obstructive symptoms are frequent. Intussusception in adults is practically always due to polyps in the intestinal tract.

Occasionally multiple polyposis may manifest rather severe symptoms at the onset. For example: One young man, age 27 years, whom I saw in 1934, was admitted into St. John's Hospital for severe gastro-intestinal hemorrhage. He vomited large quantities of blood for several days, and passed large quantities of blood in the stools. The diagnosis upon admission was rather obscure. After repeated transfusions his hemorrhage stopped and later a gastro-intestinal X-Ray revealed multiple polyposis of the entire gastro-intestinal tract. He gave no history of any symptoms pertaining to his gastro-intestinal tract prior to his admission to the hospital, and in recent communications from him, he states he has been entirely symptomless since his discharge from the hospital October 7th, 1934.

Case Report: On March 25th, 1919, I saw in consultation a young woman, age 21 years, who was vomiting and complaining of pain in abdomen and stubborn constipation. Her present illness began three days previous, on March 22nd, 1919, onset rather sudden with pain in abdomen, associated with nausea and vomiting with constipation.

Her personal, or past history, revealed she had been born and lived practically all of her life in Oklahoma. She had had no previous sicknesses of any consequence other than usual childhood diseases and malaria in 1906. In 1910, at the age of twelve years, she began to have digestive disturbances, which consisted of abdominal cramping occurring about one hour after meals. This was frequently followed by vomiting. These attacks occurred rather infrequently once in two or three months, and were usually attributed to something she had eaten.

This condition continued until the latter part of 1917, when her attacks of abdominal pain occurred with greater frequency and she began losing weight rapidly. By early February, 1918, her weight dropped to 98 pounds and she was taken to the Mayo Clinic; and, after a thorough examination, was

*Read before the Section on General Surgery, Annual Session, Oklahoma State Medical Association, May 8, 1940, in Tulsa.

told she was suffering from amoebic dysentry, also a duodenal ulcer. She was placed upon treatment for amoebic dysentry with emetine hydro-chloride, and on a Sippey treatment. She remained under treatment until August, 1918, when she returned to the Mayo Clinic and was told she was bleeding from the duodenal ulcer; her hemoglobin being 33 per cent. Blood transfusions were given and a gastroenterostomy was done by the late Dr. Charles Mayo. Four polyps were removed from the duodenum at that time and the appendix was also removed. Stool examinations at that time were negative for amoeba. She recovered from the operation rapidly and by late September, 1918, was back home and working.

Her digestive disturbances disappeared completely, and by February, 1919, her weight was 148 pounds. However, she admitted that about a month previous to her present illness of March 22, 1919, she had an attack of abdominal pain with vomiting and constipation, which lasted only a few days, after which she was able to be up and about until her present illness.

Abdominal Examination: Abdominal examination showed a mid-line scar in upper abdomen from previous surgical operation; moderately distended; considerable tympanites; a very definite peristalsis; and a well defined oblong mass could be outlined in the left lower abdomen, which was sensitive and freely movable. Temperature was 99; pulse was 120. A diagnosis, intestinal obstruction possibly due to post-operative adhesions, was made.

Operation: Ether anaesthesia, abdomen opened with left rectus incision and considerable free fluid found in abdomen. The mass was found to be an intussusception of about three feet of the ileum, occurring within two or three feet of the cecum. Upon opening the resected intestine, which consisted of about six feet of ileum, the mucosa throughout its entire length was studded with many polyps, varying in size, some as large as a lime. Recovery was satisfactory and she was discharged from the hospital in about two weeks time.

I did not see her any more until March 28, 1928, when she reported back to me, complaining of weakness and anemia. Red blood cells at that time were 4,300,000; hemoglobin, 65 per cent. She said that she had been in good health since her operation for intussusception in 1919 and gave no history of abdominal pain and discomfort since that time.

During my absence in July, 1928, she became acutely ill again with abdominal pain, nausea, and vomiting, with constipation. She was seen by Dr. Fred Y. Cronk and a diagnosis of intestinal obstruction was made. At operation, his records show, he found an intussusception of the ileum only a short distance above the site of the former intussusception of 1919. This intussusception was reduced, the ileum was opened however, and some four or five rather large polyps were removed. Doctor Broders, of the Mayo Clinic, reported the polyps removed by Doctor Cronk did not show evidence of any malignancy.

On September 29, 1929, she again returned to the Mayo Clinic due to rather marked rectal bleeding. Proctoscopic examination revealed a rather large polyp in the sigmoid, about 20 cm up, and three small ones in the rectum. These were fulgurated. The colon X-Ray showed a filling defect on the right side, which appeared to be movable. One month later a rather large polyp was excised from the cecum by Dr. Fred Rankin, and the pathological report made of Grade 1 Polypoid Adeno-Carcinomatous Polyp.

Again in January, 1930, an anastamosis was made between the sigmoid and transverse colon because of multiple polyposis in the left colon; and, on March 14, 1930, the left half of the colon was removed by Dr. Fred Rankin. On June 9, 1934, she came to me complaining of a growth in the lower abdominal wall. Examination showed a small nodular mass, about the size of a lemon, in the supra-pubic region. This was removed under local anaesthesia and pathological examination, made by Dr. I. A. Nelson, revealed a benign inflammatory condition.

She again reported to the Mayo Clinic during August, 1935, stating her constipation was becoming more troublesome, associated with vague abdominal pain at times; many nervous symptoms; both ankles began to show some oedema, this extending up to the knees. They reported their examination was essentially negative other than for the oedma of the ankles and numerous abdominal scars. Blood smears showed micro-hypochromic anaemia. Their conclusions were that her condition at that time was due to a hypoproteinemia, as a result of profuse polyposis involving the stomach and intestine. A high protein diet with extra vitamins and repeated small transfusions were advised.

She continued to have considerable oedema of the feet and ankles. Repeated small transfusions were given at frequent intervals and she continued quite active until April, 1937, when I again saw her in consultation with her physician, Dr. J. K. Lee, and she was complaining of bleeding from the rectum. Proctoscopic examination showed several polyps in the upper rectum, with one rather large one pedunculated from which there was considerable bleeding. These polyps were removed and pathological report by Dr. I. A. Nelson was benign polpoid tissue.

On June 16, 1937, she became acutely ill again with abdominal pain, nausea, and vomiting. I saw her again in consultation with Doctor Lee; she showed evidence of considerable dehydration and was referred into St. John's Hospital, where on June 20, 1937, she developed a complete obstruction. The abdomen was again opened through a high right rectus incision. The obstruction was found to be at the pyloric end of the stomach; the stomach being enormously distended. Stomach was opened and entire stomach was found to be filled with large, pedunculated polypoid masses from the pyloric to the cardiac end of the stomach. Resection of the stomach was considered inadvisable. She recovered from her acute symptoms and was discharged from the hospital July 6, 1937.

After having had six severe abdominal operations, three rectal operations, and innumerable transfusions, this young woman, for the first time, realized further therapy was useless. She, of her own accord, suggested she be allowed to go to some teaching hospital for experimental purposes. She was admitted to Memorial Hospital in New York in September, 1937. Shortly after admission, a Janeway gastrostomy was done by Dr. George T. Pack, not for the purpose of feeding, as she was able to take food by mouth at this time, but for the use of an Ebdotherm snare to remove polyps from the stomach. After the gastrostomy healed, by use of this Ebdotherm snare 12 to 50 large polyps were removed at a single sitting; this relieved the obstruction to the cardia and pylorus greatly. Shortly after, the polyps began to herniate, or prolapse out through the gastrostomy stroma. This prolapse of the polyps dilated the gastrostomy stroma until it began to enlarge, causing profuse leaking of the liquids taken by mouth, making it necessary to close the gastrostomy opening. Shortly after this, she developed a thrombo angiitis obliterans in the left arm, which they did not think was an ordinary embolic catastrophe, but more attributed to the patient's general weakness and the peculiar metabolic disturbance which occasionally follows loss of function of the gastric mucosa. She died November 2, 1937, of what their pathologists believed a so-called liver death.

Autopsy report made by Dr. Fred Stewart as of November 2, 1937:

Anatomical Diagnosis:

1. Generalized gastro-intestinal polyposis
2. Healed duodenal ulcer
3. Gastrostomy with closure

Historic Landmarks:

a. Colectomy-subtotal
b. Resection of small bowel
c. Enterotomy for polpi
d. Diffuse peritoneal adhesions
e. Gastroenterostomy

4. Congestion of liver, spleen and kidneys
5. Gangrene fingers, left hand

Mx: Gastro-intestinal polyposis:
Thrombosis of hepatic veins
Edema of liver, focal congestion and necrosis. Early interstitial acute hepatitis
Parenchymatous renal degeneration
Congestion: Spleen, kidneys

Diverticulectomy*

ANSON L. CLARK, M.D.
OKLAHOMA CITY, OKLA.

In the many and varied types of pathology encountered in urologic patients, the problem presented by vesical diverticula is one of the most technically difficult. The etiology of this form of herniation through weakened areas in the bladder wall is always some kind of bladder outlet obstruction. Infection, inflammatory changes, and congenital structural defects in the musculature of the bladder may be predisposing causes but vesical neck changes which cause increased intravesical pressure are the primary etiological factors. Herman reports that approximately 1,000 cases of vesical diverticula have been recorded in the literature, occurring in both sexes and at all ages but they are rare in women and children.

It is interesting to observe that a fibrous contracture of the bladder neck or a median

*Read before the Section on Urology and Syphilology, Annual Session, Oklahoma State Medical Association, May 7, 1940, in Tulsa.

bar type of prostatic hyperplasia is the most frequent cause of vesical diverticula. As this type of vesical neck obstruction occurs most frequently between the ages of 40 and 55 we find the typical patient with vesical diverticula is a man approximately 50 years old.

Associated with the obstructive features the accompanying complications so often present add considerably to the discomfort of the patient. Cystitis with possible calculus formation and upper urinary tract dilation with or without infection are frequent sequelae. Carcinoma involving the bladder or diverticulum is found in one out of twelve cases.

The clinical symptoms are those of the average patient with prostatic hyperplasia although several additional signs usually found should make the vesical diverticulum a suspected possibility. The patient is younger than the average one suffering from prostatism. The treatments he has sought as the diverticulum increased in size have nearly always infected the bladder contents, with the resultant typical ammoniacal odor of the urine. He will report an ability to void a second time very shortly after apparently emptying the bladder and at the second voiding the urine may be more purulent than the first specimen.

The diagnosis of vesical diverticula can fortunately be made without great discomfort to the patient and with a considerable degree of accuracy as to the extent of the herniation. Cystoscopy plays the important role in finding the exact location of the orifices which appear as dark areas, smooth and regular in outline. The orifices are usually confined to certain areas, as by far the greater percentage will be on the base and lower halves of the lateral walls particularly where the passage of the ureter through the bladder wall may tend to leave a weakened space. Occasionally the dome of the bladder may be the site of a diverticulum but the trigone is never involved.

Cystography and intravenous urography are most useful diagnostic procedures, the first to evaluate the size and extent of the diverticula and the latter to disclose the possible damage to the upper urinary tract which may be present. Cystograms at various angles and before and after the patient has voided add to the study. Contrast cystograms where the bladder and diverticulum are filled with the opaque medium and the bladder emptied and refilled with air may be made if necessary.

A recently completed case history should serve to emphasize the symptoms and discomfort caused by this type of lesion.

G. W., age forty-eight. History of frequency, urgency and discomfort at urination first noticed in 1931. By 1933 there was a definite diminution in the size of the stream at urination. During 1933 and again in 1936 the patient received courses of prostatic treatment, elsewhere, with some improvement.

In 1936 a prostatic abscess developed. This drained spontaneously through the urethra. At this time and during the following year different urinary antiseptics were prescribed. However, attacks of elevation of temperature lasting three or four

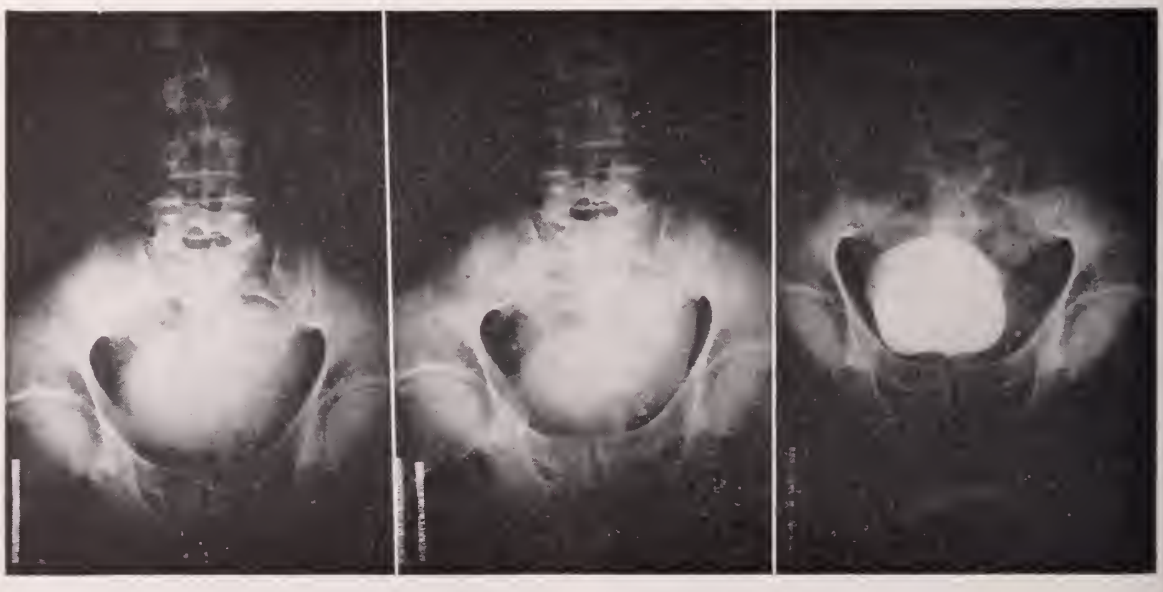


Fig. I—Cystogram with the bladder and diverticulum filled.

Fig. II—Cystogram after patient has voided showing considerable bladder retention although the diverticulum has apparently remained unchanged in size.

Fig. III—Cystogram following operation. Patient at this time was able to empty his bladder completely.

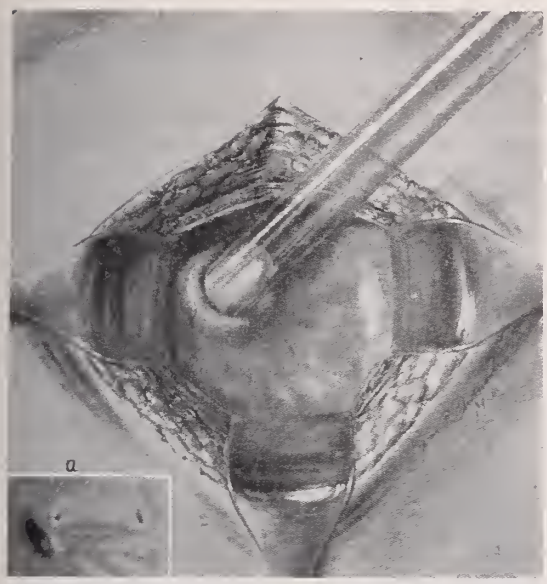


*Fig. IV—Young's intravesical diverticulectomy. The mucosa of the diverticulum may be seen being drawn up into the glass suction-tube. Insert (a) shows diverticular orifice before insertion of tube. In this drawing, as in the following illustrations, the symphysis pubis is shown uppermost.

days developed. In February, 1937, the patient had pneumonia and during his convalescence urethral sounds were passed in an attempt to improve his ability to void. Shortly afterward the urine became extremely offensive due to the strong ammoniacal odor which, previous to the passage of sounds, had not been observed.

In the fall of 1937 the Army-Navy Hospital at Hot Springs made a diagnosis of colon bacilluria and the patient was referred to our clinic for further treatment as he wished to be at home. Cystoscopic examination in November, 1937, revealed a fibrous contracture of the bladder neck and a large diverticulum, the orifice, about 2 cms. in diameter, opening 2 cms. posterior and lateral to the left ureteral orifice. The right half of the bladder appeared normal but the left half of the bladder was markedly inflamed and granular. A few days later a transurethral resection of the contracted bladder neck was done.

Postoperatively the patient could void a good stream and cystoscopically the bladder neck showed no obstruction. The disagreeable ammoniacal odor of the urine persisted and could be controlled only by daily bladder irrigations or frequent



Fig. V—Eversion of diverticulum by suction, toothed clamp in position to grasp sac drawn into bladder.

courses of sulfanilamide. For a year with this treatment performed at home the patient existed in comparative comfort until attacks of bladder discomfort became more frequent and more severe. Hematuria accompanied these exacerbations and the irritation grew slowly but rather steadily worse.

Early in 1939 the patient returned for further suggestions and bladder irrigations using solutions of potassium permanganate, dilute silver nitrate and mercarbolide with oral administration of sulfanilamide and sulfaypridine brought temporary improvement. The patient had noticed that four to six ounces was all he could void at one time and complained that the stream would flow freely but would cut-off suddenly.

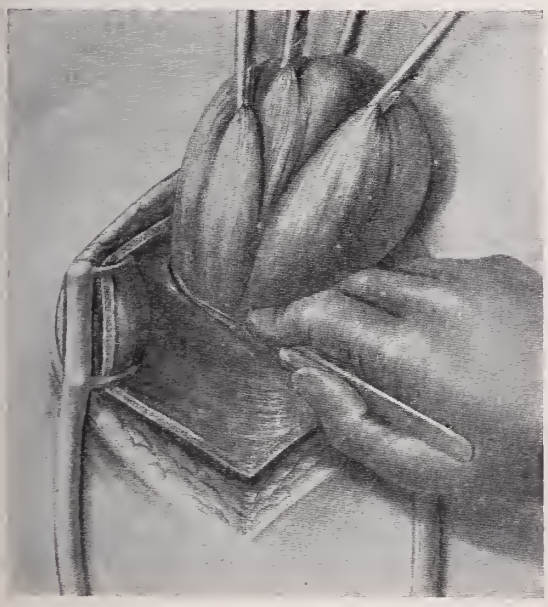


Fig. VI—The diverticulum has been drawn into the bladder and completely everted. Incision around neck begun.

*Figures IV to IX are reproduced from Young's Practice of Urology with the kind permission of Dr. Hugh H. Young and W. B. Saunders Company.

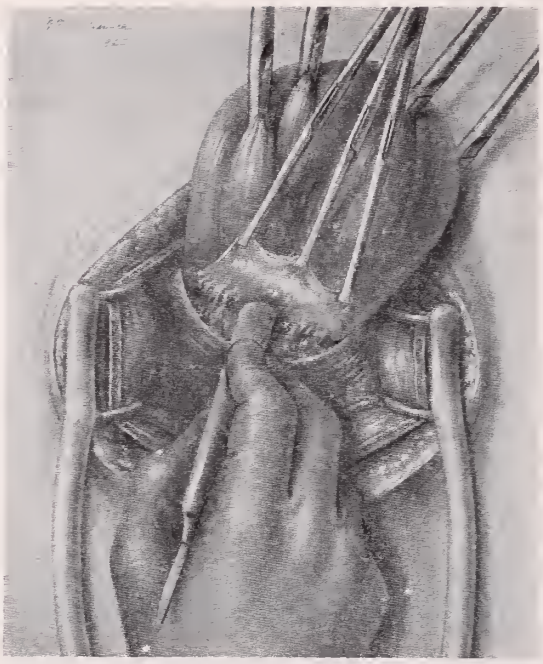


Fig. VII—Separation of sac (mucosa, submucosa, and a portion of fibrous wall) from deeper tissues.

Cystograms revealed a bladder capacity of approximately 400 cc. with a diverticulum containing an additional 320 cc. Upon voiding a cystogram showed 220 cc. remaining in the bladder with the diverticulum obstructing the free evacuation of the bladder contents. At this time the patient demanded surgical relief and after the bladder had been irrigated daily for three weeks with dilute silver nitrate solution an intravesical diverticulectomy was done on January 18, 1940.

The first requisite in the treatment of vesical diverticula is the removal of the obstruction at the bladder neck. Transurethral resection and removal of any vesical calculi may so improve the situation that further operative interference will be unnecessary. Barnes has classified the vesical diverticula into two groups; namely, those which do not drain and therefore require treatment; and those which do drain, and do not require treatment.

In the group which do not drain and, therefore, turn to surgery for ultimate relief,

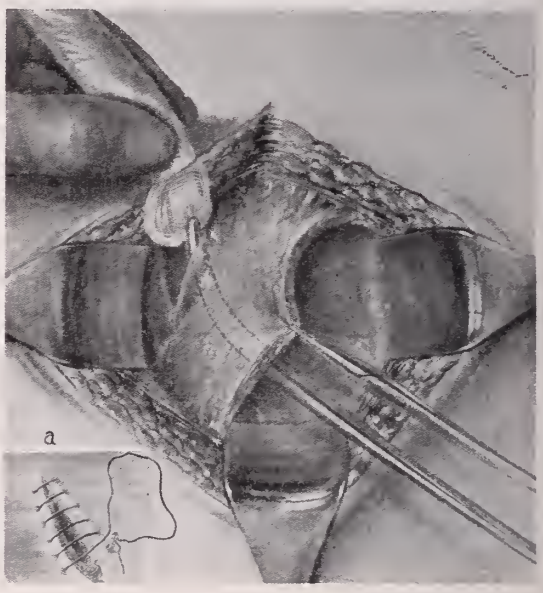


Fig. VIII—The site of the diverticulum is drained extravesically by means of a cigarette drain carried down lateral to the bladder. Bladder mucosa is then closed with a continuous catgut, as shown in insert (a).

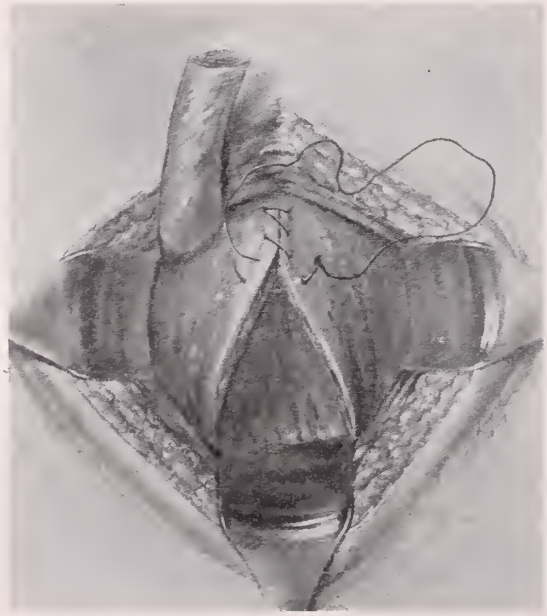


Fig. IX—The extravesical drain leading to extravesical cavity from which diverticulum was removed is shown. Bladder is being closed.

the large diverticula with an associated peridiverticulitis are, by far, the most difficult in which to obtain a satisfactory end result. While some authors have suggested extending the incision downward from the edge of the cystostomy into the diverticular orifice, it would seem that this procedure may injure the structures behind or attached to the diverticulum, and would therefore defeat the large factor of safety made possible by Young when he first evolved the intravesical diverticulectomy. Since 1904, when Hugh Young first inverted a small diverticulum into the bladder and removed it intravesically, the method which he so completely and ably described has remained the operation of choice in the surgical treatment of diverticula.

In this operation glass tubes of varying diameters are prepared so that one may have

at the time of operation a tube with the largest possible diameter to fit tightly within the orifices of the diverticulum. The widest possible exposure of the bladder is obtained and the largest possible tube inserted into the diverticulum. Suction is then applied to the tube by means of a vacuum pump or a heavy syringe. The diverticular sac is gently pulled into the glass tube and slowly the tube is pulled from the diverticular orifice until the sac can be grasped with forceps. After the diverticulum has been everted into the bladder, a circular incision is made through the mucosa at the neck of the diverticulum, and the mucous membrane which lined the diverticulum is completely peeled away by blunt dissection. A purse-string suture is placed around the neck of the diverticulum and after the diverticular sac, now denuded of its mucous membrane, is replaced into its cavity the suture is tied intravesically. A cigarette drain is placed in the diverticular cavity extravesically and a Pezzar catheter is placed to drain the bladder, as the cystostomy incision is closed.

In the surgical treatment of diverticula two important procedures should be emphasized; first the obstructive lesion at the bladder neck should be eliminated and second, treatment should be applied to the bladder to reduce the infection and inflammation to a minimum before diverticulectomy is done.

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Brain Tumors I've Met*

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In Eye, Ear, Nose, and Throat practice, brain tumors are not so frequent, but that they can be easily passed, and for that reason the neuro-surgeon is constantly urging us to find these cases early while the chance of recovery is much better.

I am not attempting to cover the entire subject of brain tumors, but only to bring what has been helpful to me in detecting these lesions. A systematic check of the patient's symptoms and signs will usually furnish the diagnosis and the following three cases will illustrate that the outlook is not always gloomy.

Case 1. Mr. T. J. (white), 29, Stockman, came to have his eyes examined while his wife was convalescing from child-birth in the local hospital. After finding papilloedema of both discs, pulse 56 to 72, temperature 98 to 99 degrees, he was interrogated further and stated he had headaches, especially at night with some pain on touching right side of face for the last two weeks. He vomited spontaneously after stepping from elevator as he came to the office, which was without nausea, and he attributed this to his inexperience in riding elevators. His vision was 20/20 O.U. without glasses, while correction showed only the need of a plus 50 cylinder at axis 90. Fields were constricted from 20 to 30 degrees bilaterally, Wassermann and urinalysis negative. No foci of infection could be found.

He was then referred to Doctors Harry Wilkins and J. Herrmann, of Oklahoma City for further study where a complete physical examination by them showed:

General—Well nourished male; temperature, pulse and respiration normal. Appears very anxious and somewhat irritable.

Personality change?

Cranial Nerves.

Neurological—1 undetermined; 2 no ophthalmoscopic examination. 4, 6, 3 no paralysis; slight hesitancy; 5 could detect sharp and blunt instrument; 7 facial weakness rt.; 8 hearing O. K.; 9 reflexes intact; 10 vagus O. K.; 11 Trapezius O. K.; 12 tongue normal.

Muscular—no atrophy, no weakness.

Cerebellar—Heel and knee test negative. Gait normal. No past pointing; Finger to nose test negative; Adiadochocinesia negative. Reflexes—Patellar, achilles, biceps negative; abdominal hyperactive;

*Read before the Section on Eye, Ear, Nose and Throat, Annual Session, Oklahoma State Medical Association, May 8, 1940, in Tulsa.

Babinski suggestive plus on right. Romberg mildly positive.

E. E. N. & T.: Slight proptosis of eyes with increased intrabulbar pressure. Sclerae clear. Mild cervical adenopathy. Chest—clear, excursion normal.

C. V.—Blood pressure 140/85; no enlargement, Rate 90; Rhythm regular.

Abdomen—No masses or tenderness.

Extremities—Normal.

Opinion—Probably there is some increased intercranial pressure from (1) tumor which may exert some pressure on 5th nerve right. Exact nature undetermined.

Clinical Laboratory: 5-1-39 Urine: yellow, cloudy, alkaline, albumen, glucose and acetone negative, crystals heavy amorphous P04, organisms few, cells occasional squamous epithelial. Blood—5-1-39 85% Tal, RBC 4,230,000 size, shape and color normal.

WBC 9,350, P. 74, L. 25, platelets normal.

ROENTGENOLOGIST'S REPORT:

4-28-39, Ventriculogram shows a good filling of both the lateral and third ventricles. The posterior horn of the left ventricle is somewhat lower in position on the PA view. The lateral view, however, does not show any evidence of compression from the convexity. Both lateral and third ventricles are dilated. X-ray findings are suggestive of a posterior fossa tumor.

Operation: Tumor filling right transverse sinus. All other structures normal.

Microscopic Diagnosis—Probable meningioma. Neurofibroma cannot be excluded.

Prognosis: Good, with no recurrence likely, and patient has been back attending to business for approximately one year.

Case 2. Mrs. A. C. (white), age 48, Housewife.

Chief Complaint: Headache past five weeks. Vomiting past week. Disturbance of vision past four weeks. Motor and sensory disturbance of right arm the past two days. Menopause in progress during past year. Aphasia for names of persons and objects.

Present Illness: Patient has had continuous headaches for past five weeks and would awaken with them; are of a low frontal type; and seem more localized over the right eye. Three weeks ago she went to bed, because of the severity, but the headache was worse the following day. One week after going to bed she menstruated for one day, and her head felt easier. Two weeks later she received an x-ray treatment over ovaries and uterus.

Vomiting then set in, and it was not projectile in type but was accompanied by extreme nausea. One week after being in bed she tried to read and complained she could see only one word at a time, she also tried to write but misspelled the words and could not follow the line. About the same time she noticed difficulty in expressing her thoughts and the names of various things. She understood what was being said to her but hesitated in choosing words in her reply. During the next few days she noticed a weakness and disturbance (sensory) in the right arm. She also noticed a bitter taste in her mouth, and the daughter has noticed an odor about the patient. During the past year daughter has noticed the patient to be less critical and more cognizant of small irritating events.

Examination was done at the request of Dr. Ed White, who felt she must have a brain tumor, after toxemia of pregnancy had been ruled out on finding no pregnancy existed. The patient was partially disoriented and picked at the bed clothing but would slowly answer quesions. Her temperature had varied from 97 to 99½, Pulse 68 to 84, respirations 14 to 18. During this examination she showed slight papillo-edema with left hemianopsia; inability to name objects placed in either hand and a decided weakness in her right hand upon having her squeeze my fingers. The diagnosis of brain tumor was agreed upon and the patient sent to Doctors Harry Wilkins and J. Herrmann of Oklahoma City for confirmation. Their examination further showed:

PHYSICAL EXAMINATION

General: Blood pressure 130-90, Pulse 68, Temperature 99, Resp. 18. Patient is a well-developed, well-nourished, white female not acutely ill but evidencing difficulty in choice of words when conversing or naming objects. She wrinkled her brow as though her head ached as she said it did.

Head: Contour normal. Percussion by Dr. Wilkins revealed no dull or hyperresonant areas. E.E.N.&T. essentially negative. Tongue coated.

Chest: Breasts large. No masses or tenderness.

Lungs: Negative.

Cardiac borders and sounds normal. Regular.

Abdomen: Negative to masses, tenderness and rigidity.

G. U. Pelvic by Dr. Wilkins showed the uterus to be retroflexed but not enlarged or fixed.

Neurological: Cranial nerves.

1. Negative for symptoms.
2. Reacts to light and accommodation. Ophthalmoscopic by Dr. Wilkins showed some of the physiological cuppings to be present yet. There is a quadratic visional disturbance, which involves both left lower quadrants but is greater on the right eye, probably some involvements of the left upper quadrant.

3, 4, 5, 6. Disturbance of temperature sensation on right side of face, pain when elicited is extreme. Marked itching of nose.

7. There is a weakness of the facial, evidenced by bitter taste in mouth; decreased prominence of naso-labial fold on right side, and paresis, if not paralysis of the right risorius muscle.
8. Hearing is good. No dizziness, ringing in ears.

9, 10. No difficulty in swallowing.

11. Function impaired.
12. No atrophy of tongue or deviation.

There is ataxia of right arm and leg, loss of joint position sense; and touch sensation is poorly localized on right side. Deep pain sensation is exaggerated on right side. Abdominal reflex absent on right, brisk on left.

Babinsky on right absent or questionable. Wrist, biceps and triceps slightly greater on right side. Chaddock and Oppenheim painful to patient. Hoffmans sign questionable.

Clinical Laboratory:

1-18 '36. Urinalysis: yellow; cloudy; acid; 1.029; albumen trace; glucose negative; acetone 4 plus; WBC many; Organisms many; Many squamous epithelial cells.

1-20 '36. Blood: 80% Tal.; RBC 4,050,000; 1; WBC 6,950; P. 72; L. 28; platelets normal.

1-20 '36. Patient type 4.

Pre-Operative Diagnosis: Brain Tumor—Left Parietal. Deep Seated Abscess?

At operation a left temporal Cerebri tumor was found, measuring 4½ by 5 cms. Pathological report shows a nonencapsulated, poorly circumscribed tumor composed of cells with an average size nucleus which are ovoid to spheroid and take a moderately dark stain. Cytoplasm is scanty, the arrangement is not characteristic, blood vessels are moderately numerous. Diagnosis: Probable Spongioblastoma Uniforme.

Prognosis: Fatal. Patient died approximately one year later, with recurrence and metastasis.

Case 3. Mrs. J. S. (white), age 49, came complaining of occasional occipital headaches which she attributed to need of changing glasses. She had worn her present correction two years and was found to have a bilateral papillo-edema, more marked on the left, fields uniformly constricted 15 to 25 degrees in both eyes, a sensory loss over all three branches of left trigeminal. Central vision 20/30 o.u. which could be corrected to 20/20 o. u. Nystagmus was present in horizontal planes bilaterally, but much more marked when looking toward the right. The right eighth nerve showed a complete deafness with the Weber lateralized to the left. Her olfactory sense has sensations of smelling odors at times which she knows from past experiences are not there, but her taste, projection of tongue, facial contraction of muscles and other cranial nerves were uninvolved. She had a positive Romberg, together with error in past pointing with the right finger to the nose with eyes closed. Temperature 99, pulse 78, blood pressure 140/85, Wassermann negative, as well as urinalysis. X-ray of skull showed erosion of right petrous area at its base.

She elected to go to Mayo's and there because of a papillo-edema, loss of right eighth nerve hearing, ventriculo graphic, evidence of erosion of the contiguous bones a diagnosis of right cerebellopontine tumor was made and an intracapsular enucleation of a large degenerating cystic neurofibroma attached to the right eighth nerve was done. Patient had some post-operative reaction due to slowness in reestablishing spinal fluid circulation but is alive now, two years later.

Summary:

All three cases showed papillo-edema, slow pulse, and variation of temperature. Two had some vomiting, one with and the other without nausea, and all three cases were content to feel other causes than brain tumor their lesion. The patient dreads a brain tumor and consequently wishes to have the doctor find other explanations. After all, our part as ophthalmologists and otolaryngologists is to separate the brain tumor patient from the other conditions we encounter and send him on his way for further study and treatment at the hands of the neuro-surgeon.

Liver Damage*

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The liver, being the largest of the viscera and having the most numerous and varied functions, demands the attention of the clinician. Doubtless, not all is known about its part in our physical economy, but enough is known to make a full discussion of its functional aberrations an appalling task; and of course, an exhaustive study will not be attempted. Rather, an effort will be made to sketch a skeletal structure of the not unusual types of damage. Keeping such clinical entities in mind, we are more apt to take the necessary steps to prevent them and spot one when it occurs. Truly, we diagnose only what we visualize and suspect.

As a background for this approach, may I remind you of only the most vital and unquestioned functions of this viscus and direct your attention to a few of the more dependable laboratory tests.

The average daily secretion of bile by the liver is 1000 cc. In addition to the ordinary salts found in other body fluids, bile contains bile pigments, the chief of which is bilirubin, bile salts and cholesterol. The bile salts and cholesterol are formed in the liver while the pigment is produced chiefly in the tissues of the reticulo-endothelial system; the stellate Kupffer cells being a part of that apparatus, some bilirubin is formed in the cells of this system which are in the liver.

There is in health a storage of foods in the liver and the liver in some way regulates their supply to the tissues as required. Though the liver is a depot for all three of the chief classes of foods, carbohydrates, proteins and fats, its store of carbohydrates is the largest, chiefly in the form of glycogen, which is readily converted into glucose for utilization by the tissues.

The protein metabolism in the liver consists essentially of the conversion of the amino-acids into glucose and urea.

The liver is intimately concerned in the production of fibrinogen, prothrombin and heparin.

Not the least important office of this major general of our viscera is that of protecting the body against poisons of various sorts, such as alkaloids, heavy metallic salts and bacterial products. Arsenobenzol preparations, bismuth, mercury, sulfanilamide, sulfapyridine, nicotine, morphine and many other poisons are removed from the blood as they pass through the liver—with how much damage to the liver itself, is a part of the import of this discussion.

The so-called "factor of safety" of the liver is such that less than 50 per cent of it is necessary for the performance of its vital functions. This ability to compensate for loss of so great a part of its secretory substance, while highly benificent, renders early detection of beginning derangement more difficult.

Probably the tests of liver function most commonly in use are those based on the secretion of bile, which may be:

(1) A study of the biliary products in the stool.

(2) A study of the duodenal contents procured by the duodenal tube.

(3) A study of the biliary substances in the blood.

For accuracy, the quantitative determination of the bilirubin in the blood is most dependable under proper safeguards of interpretation. An icterus index below 5 is considered normal, 8 to 15 is considered clinical icterus, and a reading above 30, is marked icterus. The Van den Bergh reaction, based on the color reaction of the old diazo reagent with bilirubin, is extensively used. More of this test later when we come to refer briefly to jaundice. Urobilinuria which results from relatively slight injury to the liver cells deserves more attention as an indication of liver derangement than we have time to give in this presentation.

Among the tests based on the hepatic excretion of dyes, the bromsulphalein seems to be most generally in favor. It may be expected to give positive results only after very extensive liver injury and in obstructive jaundice; hence, it is of limited clinical value.

With tests based on relation of the liver to carbohydrate metabolism, as the Levulose or Fructose test and with those related to protein metabolism, I have had little experience.

*Read before the Section on General Medicine, Annual Session, Oklahoma State Medical Association, May 7, 1940 in Tulsa.

Of the tests based on the detoxifying activity of the liver, the Quick hippuric acid test seems to be gaining in favor and has the advantage of simplicity of execution. It is assumed that the liver is concerned with the synthesizing of benzoic acid and glycine to form hippuric acid. Six grams of sodium benzoate given by mouth to a normal person result in the excretion of 3 grams of hippuric acid in the urine in 4 hours.

The prothrombin clotting time of the blood is of particular importance to the surgeon, since now we have vitamin K of proven efficacy unless the liver has undergone advanced necrosis.

Etiology. In the discussion of many liver conditions, the following statement is attributed to Osler: "The absence of an etiologic factor was a remarkable feature of the disease." However, we may classify the causes of hepatic insufficiency as:

(1) Metabolic or Nutritional.
(2) Biliary Obstruction.
(3) Bacterial Toxins.
(4) Chemical Poisons.

Under the first heading, we think of food deficiencies, particularly carbohydrates and certain vitamins. Perhaps here belongs the acute injury of the liver in a thyrotoxic crisis. Under (2), biliary obstruction always results in hepatic disease if sufficiently prolonged, a complete obstruction naturally being more rapidly damaging than a partial obstruction. (3) Bacterial products which may injure the parenchyma of the liver are legion in number, since nearly all infectious diseases have been shown to depress liver function to some extent. (4) Among the chemical agents may be mentioned as chief offenders, chloroform, arsenicals, bismuth salts, sulfanilamide and sulfapyridine.

As clinical entities, we have the "liver patient" with jaundice and the one without jaundice. Jaundice is always a suggestive lead, which we may follow to a correct diagnosis usually through history, physical examination and simple laboratory tests alone. A smaller per cent of cases will require more prolonged observation and liver function tests. The subject of jaundice is a chapter within itself, beyond the confines of this paper. Suffice it to say that accurate diagnosis requires that some rational classification, such as that of Rich, must be kept in mind if one is to classify the case at hand. Rich places all case of jaundice under one of two heads:

(1) Retention Jaundice, or
(2) Regurgitant Jaundice.

The earmarks of retention jaundice are an indirect Van den Bergh of the blood, the presence of urobilin in the urine, and having as its cause, an overproduction of bilirubin with subnormal liver function; while regurgitant jaundice is characterized by direct Van den Bergh reaction, the presence in the urine of bilirubin and bile salts and having as its cause, the rupture of bile canaliculi.

Clinically important and even serious liver damage may occur without jaundice. Deaths following operations on the biliary tract first described by Heyd as due to liver damage, are known to follow operations other than those on the gall bladder. The liver of the crisis following thyroidectomy characterized by hyperpyrexia and sometimes death, shows areas of atrophy, fatty metamorphosis and focal necrosis. This catastrophe is a hepatorenal syndrome, deserving of both the internist and the surgeon much more attention than this mention in passing.

The patient without jaundice may present bizarre symptoms which we may be slow to ascribe to a liver derangement. Impaired appetite, epigastric fullness, distress after meals, belching, nausea, occasional emesis and loss of strength, if not attributable to some other pathological condition, warrant a suspicion of liver insufficiency. A palpably enlarged and tender liver, an enlarged spleen and dilated periumbilical veins are significant. A practical point in diagnosis is that usually in hepatic malignancy, the spleen is not enlarged.

Chemo-therapy is now in the front rank of therapeutic measures and the untoward effects of some of the newer chemicals are not to be ignored. Brooks states that "Hemolytic jaundice occurs when sulfanilamide has destroyed large numbers of red blood cells, the jaundice being due to the overloading of the liver with the elimination of hemoglobin pigments. Toxic jaundice, the manifestation of toxic hepatitis, results from the poisonous action of sulfanilamide on the liver. The liver is enlarged, bile appears in the urine, there is a high icterus index and a biphasic Van den Bergh reaction."

At times, we are in the embarrassing position of not knowing whether evident hepatic injury is caused by the disease or by the remedy used in its treatment. By way of illustration, I submit the following observation: On my service at the O. S. P. Hospital,

46 subjects developed jaundice between March 1935 and November 15, 1937.
32 had Positive Wassermanns.
14 had Negative Wassermanns.
9 were taking arsenicals, intravenously.
21 were taking Bismuth, intramuscularly.
3 were on rest periods.
13 were negative Wassermanns, taking no anti-leutic treatment.

Perhaps, in 25 per cent of patients undergoing intensive syphilitic treatment, there is some damage to the liver cells.

Treatment of hepatic insufficiency may not be expected to be effective (Snell).

(1) If there is complete obstruction of the bile ducts.
(2) If a hepatoxic agent is still operative, or
(3) If there is a marked reduction of flow of portal blood.

Also, "On both clinical and experimental ground, it may be said that the general problem of protecting the parenchyma of the liver is somewhat the same in treatment of all types of hepatic injury." No specific protective substances have been successfully used. A diet high in carbohydrates is of paramount importance. As a means of prevention of liver insufficiency preoperatively and during the giving of arsenicals, bismuth, sulfanilamide and similar drugs, the patient should have copious quantities of syrups, jellies, jams, candy and sweetened fruit juice. When too ill to take these by mouth, glucose intravenously, 5 to 10 per cent solution up to 3 liters daily, should be given. Liver extract, parenterally and vitamin concentrates, are adjuvants. Thiamin Chloride, B, is particularly valuable in the treatment of the patient whose liver has borne the brunt of alcoholic abuse. The treatment of the hemorrhagic diathesis, associated with chronic hepatic disease and jaundice, with bile, bile salts and vitamin K, is a new and brilliant chapter in medicine.

In conclusion, I wish to acknowledge that this has been an incomplete consideration of a big subject. My purpose has been to offer a perspective which may be of some clinical value.

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DISCUSSION

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Liver Damage

It is rare to hear as comprehensive a discussion on the liver as Dr. McCarley has given us. It required very close attention because no words were wasted. He covered the clinical and gross evidence as well as the more technical requirements.

In any investigation of a liver affection, one must depend more upon the history and keenness of observation than upon the reports of technicians in properly appraising any liver damage.

He called attention to the borderline between functional and pathological states which is often very difficult to determine. The borderline state between a physiological state and pathological condition is quite important, as very frequently the one precedes the other as, for example, ulcer of the duodenum located at the mouth of the Ampulla of Vater by reason of swelling interferes with drainage of the common duct with a consequent involvement of the liver with jaundice. The same can be said of adhesions about the common duct or the mouth of the gall bladder or even the gall bladder itself; swelling of the head of the pancreas, whether it is a temporary affair or tumor, as in two-thirds of folk the common duct passes through the head of the pancreas; internal diverticula of the duodenum or even spasm of the duodenum involving the first leg, all of these interfere with the drainage from the liver and the consequent interference with drainage of the biliary canaliculi in the liver. Again, certain definite physiological states, as found in an achylorhydria of more than temporary nature, interfere with the function of the liver. The action of the liver is largely dependent upon the acidity of the stomach contents as it enters the duodenum.

It is my opinion we see more functional disturbances of the liver than we are wont to consider because of our limited knowledge of living pathology of the liver and because of its seriousness we are inclined to consider all evidence of liver disturbances as pathological.

The technical reports on the various tests of liver functions are unsatisfactory so far as final conclusions go as is evidenced by the many tests we have. Dr. McCarley referred to many of them. There are two, however, to which I would like to call your attention. One, Iodpekitin dye which is used in the visualization of the gall bladder with X-Ray, the percentage of dye, thirty minutes or one hour after the dye is injected, found in the blood stream, as determined by a study of the blood serum, gives us a most important bit of information as to the liver ability. This depends, of course, on the physiological condition of the liver.

The examination of the stool for biliary findings was mentioned in the paper. I presume the one to which Dr. McCarley referred was the examination of the stool for the de-

termination of bilirubin. If the bile is not complete in its process of development the presence of bilirubin, in the absence of biliverdin, will be pink or red on contact with nitric acid; if it is in normal state it will be blue or green. This is found frequently in the summer diarrhoea in which the bile is not carried through to its final state. This type of diarrhoea is due to poor liver function.

There are a number of known and recognized diseases of the liver: Toxic and infectious, degenerative, new growths, etc. Undoubtedly the degenerative types are due primarily to a circulatory disease with the development of connective tissue in the stroma of the liver with a consequent pressure atrophy of the cell. The direct destruction of the cells is largely of chemical origin to which Dr. McCarley referred in his paper.

So that in determining liver conditions two things must be borne in mind; whether the condition is of temporary, that is, of physiological nature, or of definite pathological significance, and, second, the original source of the disturbance which necessitates a most complete survey and accurate investigative observation of the patient with careful study as many of these things come from without rather than from within the liver.

Osteomyelitis As A Cause of Crippling In Children*

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As a cause for crippling in children, osteomyelitis is one of the most serious diseases we have. The chief causes for its being such a serious condition are as follows:

First, the seriousness from a general standpoint, due to the high mortality in the acute stage.

Second, the very rapid destruction of the bone structure and the danger of involvement of adjacent joints; also the danger of involvement of more than one bone.

Third, the chronicity of the disease.

Because of the onset, the high temperature, the extreme illness of the patient, plus the negative x-ray findings during the first few days, the diagnosis is difficult, especially for the general practitioner who sees relatively few acute cases of osteomyelitis.

This typical bone infection occurs usually in children between the ages of five and fifteen years of age and strikes more often in the shafts of the long bones, the femur and tibia being most often affected. Injuries such as bruises and sprains contribute quite often to its localization. It is quite common for this disease to develop in a child when there is some type of infection present, as, for instance, boils or skin infections, such as impetigo. Therefore, we can say, as a matter of prevention, that all infections, especially of the skin, should be healed, if possible, before any hazardous exercises are taken such as football, wrestling, bicycle riding or horseback riding.

When the correct diagnosis is made, there may be difficulty in obtaining adequate medical and hospital care, as patients in extremeness many times cannot be moved to distant hospitals without danger of serious consequences. Another difficulty is encountered when the child is hospitalized, in performing the apparently necessary operation for drainage of the infected bone. Since statistics prove that there is a higher death rate in children operated immediately than in those that are treated for a few days, treatment should be instituted for the building up of the general condition. Therefore, it seems reasonable that it is necessary to postpone operative treatment of the diseased bone which, in itself, would best be drained.

It is the opinion of the majority of orthopedic surgeons that the operation should be just as conservative as possible to permit the release of the infected material.

With the preliminary drainage done, it is important that the child have adequate external protection to the affected limb, which may be treated with the solid plaster cast in case the Orr method is followed, or a metal splint if periodic dressings are to be carried out. It goes without saying that the arm or leg should be placed in the most favorable

*Read before International Society for Crippled Children, Dallas, Texas, October 21, 1939.

position for any degree of limitation of motion that may result following the involvement of one or more joints.

In the leg, for instance, the hip should be in a position of 15 degrees abduction and 15 degrees flexion, the knee 10 degrees flexion, and in the ankle, the foot should be at a right angle, or 90 degrees with the leg. Throughout the treatment, the principle of protection in the proper position should be maintained. Even though the joints are not involved, the danger of muscle contraction, with resulting deformity, is a constant cause of anxiety.

The after care, due to the relatively long convalescence, is quite important and is accompanied by many difficulties.

First, long hospitalization results in heavy costs whether it is borne by the family or the State. In case the child is being cared for in a city or State institution, the average case will not require more than two to three weeks' hospitalization, except infections of the upper femur or pelvis. With institutions of this type, usually having long waiting lists, it is hardly fair to patients with other orthopedic conditions to be denied hospital facilities. Many times one bed, which is occupied for months by an osteomyelitis patient, might take care of several patients over this same period.

There are two main reasons why patients cannot be safely discharged from the hospital after the actual need of hospitalization is over. First, the type of care that will be given at home; and, second, the transportation problem.

A third consideration, which is minor, is the child's accessibility to a school. Some parents have asked that the child be maintained in the hospital in order that he may attend the hospital school. That request is not warranted as the school should be maintained only for those children who are, of necessity, confined to the hospital.

The transportation problem is a serious one, as many of the cases are from the far-away counties, and many of these counties have depleted crippled children's funds to the extent that the county itself is unable to furnish transportation.

In the majority of these children with serious bone infections involving the femur, long hip casts are necessary, which make it difficult for them to ride in an automobile.

As a result, many children do not return to the orthopedic clinic when it is thought necessary.

In these chronic cases, the importance of the field nurses becomes evident. While the nurse cannot supply transportation, she can personally contact the family and place before them the seriousness and dangers of neglect, such as contraction deformities, pathological fractures, stiffness of adjacent joints and the possibility of marked shortening of the affected leg.

When the disease reaches the chronic state several weeks after the onset, further surgery may be necessary, such as providing more adequate drainage and removal of necrotic bone. Secondary operations may be absolutely necessary before healing can take place. Cases neglected because of failure to return to the clinic may have persisting draining sinuses and further bone destruction over a period of years; where as, in the great majority of cases, the healing will take place more promptly if the child is treated regularly in the Out-Patient Department, and the supplemental operation is done as soon as the surgeon decides that this procedure is necessary.

Physical therapy is quite important. First, the ultra-violet ray is undoubtedly of great benefit in cases, especially those treated in the winter months when sunshine is not regularly available. Massage and muscle training should be instituted as soon as it is safe. Since there is always danger of an acute exacerbation, rough treatment should, by all means, be avoided.

Rehabilitation in patients left permanently partially disabled, should be carefully planned. It is a well known fact that osteomyelitis may flare up in later years; therefore, it is most important that the child be trained in some occupation that is not strenuous and work that is free from danger of injury or excessive strain on the patient, if possible. Heavy manual labor such as truck driving, heavy technical work, as in oil field labor, is too hazardous for a man who has, in past years, suffered from osteomyelitis. A recurrent, acute attack, even if the man is protected by workman's compensation insurance, is a heavy economical loss as the course of the disease may be of many months' duration.

I feel that it is quite important that the Rehabilitation Department consult the orthopedic surgeon before selecting the kind of work a man or women with this disease is to follow in later years.

The Freedom of Science

Lewis J. Moorman, M.D.

Oklahoma City

Creative effort never clicks with the clock. Punching a time card holds no interest for the true scientist. His work is punctuated only by irregular meals and uncertain hours between long periods of thoughtful application. Seldom is the realm of thought wholly free from imaginary lines of action and fitful dreams of accomplishment. Robbed of initiative and personal freedom, he would be left with a miserable morsel which even his dog would disdain.

John Burroughs says: "Science seeks to understand the universe, art to enjoy it. A man of pure science like Darwin, is as disinterested as a great artist like Shakespeare. . . . The truth alone is his quest. He is tracing the footsteps of creative energy through organic nature. . . . Indeed, the man of science follows an ideal as truly as does the poet, and will pass by fortune, honors and all worldly success to cleave to it."

The story of Madame Curie's untiring search for radium supplies an outstanding example. She was of Polish birth, with an intellectual background and a national pride which made it impossible for her to passively accept the stifling domination of Russian rule under Alexander II. Under the driving force of her genius, she secretly participated in anti-Russian activities. While in school she learned perfectly the required Russian language for the Government inspector, but retained her beloved Polish for her own self-respect. Under the "Tsar of all Russias," life was difficult, poverty inevitable and personal freedom impossible. Tuberculosis, one of the Tsar's confederates, had placed its mark upon the family. The passing of the consumptive mother suddenly brought the children under the hard ferule of household necessity and left an abiding heritage of disease. Courageously Marie Curie negotiated all the duties of childhood and engaged in the cultivation of her exceptional mind. No hardships were too great, no tasks too difficult, no failures too formidable for this aspiring genius, already looking forward to a career in science.

Through industry and frugality, by the time she was nineteen years of age she was eligible for admission to The Sorbonne and financially able to pay the required fees with only enough left to eke out a bare existence in a tiny sixth floor attic room without heat, light or water. This mattered little to her. She had no time for conventional Paris, no thought of comfort, food or leisure except to keep soul and body on the trail of science. Under the influence of the Faculty of Science, an incomparable urge took possession of this young Polish girl—the desire to encompass the unchangeable laws of nature with her human intelligence made all other interests seem insignificant. Emancipation from the serfdom of Russian rule caused her to welcome voluntary hardships.

Every doctor should follow the story of Madame Curie's struggle for the sake of science. The course of her education, her marriage to Pierre Curie, the devoted physicist who was to join her in the long toilsome search for radium, her ultimate victory in spite of untold difficulties, including lack of institutional, government or private support. She was forced to work in an abandoned shed with inadequate laboratory equipment and other physical facilities. She faced the necessity of handling tons of pitchblende with her own delicate hands under the power of a frail body, also taxed by the duties of motherhood and the exacting toll of the tubercle bacillus.

Ten years after her admission to The Sorbonne, and nearly four years after she embarked upon the incredible adventure, she determined the atomic weight of her first decigram of pure radium. Though she had grown thinner and paler as she clung to her tasks and her test-tubes with superhuman pertinacity, on this day of ultimate achievement she was aglow with the realization of success. After sitting with her four-year-old daughter until she was sound asleep, she and Pierre slipped into the street and walked silently arm in arm to the shed which was to share their immortality. Unlocking the creaking door, they penetrated the darkness to observe for the first time the phosphorescent luminosity of radium. In the strange light of her discovery, she sat humbly and silently, contemplating this mysterious child of her intelligence just as she had

sat in the presence of her own flesh and blood one hour before. Fortunately the realization of the full portent of her accomplishment was gradual. The power of radium, the scope of its usefulness and its revolutionary influence in the realm of science, could not be fully anticipated.

While this short summary serves our immediate purpose, the reader is urged to follow the further unfolding of Madame Curie's remarkable genius. She manifested sustained interest and untiring activity in science until her death, thirty years later. Her service in the field of medicine has been of inestimable value to humanity. Her fame and influence extended throughout the world. Finally her physical endurance came to an end. On account of x-ray evidence of the old pathology in her lungs and the suspicion of reactivation of the long-standing tuberculous condition, she was sent to a sanatorium, but careful diagnostic studies indicated that her death was due to anemia caused by long continued exposure to radioactive bodies. Radium not only set the stage for her signal success and played the leading role in the succeeding years of her life, but it had silently woven the curtain which closed the last act.

In the words of her daughter: "On Friday, July 6, 1934, at noon, without speeches or processions, without a politician or an official present, Mme. Curie modestly took her place in the realm of the dead. She was buried in the cemetery at Sceaux in the presence of her relatives, her friends, and the co-workers who loved her. Her coffin was placed above that of Pierre Curie. Bronya and Joseph Sklodovski (sister and brother) threw into the open grave a handful of earth brought from Poland. The gravestone was enriched by a new line: Marie Curie-Sklodovski, 1867-1934.

"A year later, the book which Marie had finished before disappearing brought her last message to the young "lovers of physics." At the Radium Institute, where work had been resumed, the enormous volume was added to other scientific works in the light-filled library. On the gray cover was the name of the author: "Mme. Pierre Curie, Professor at the Sorbonne. Nobel Prize in Physics. Nobel Prize in Chemistry."

"The title was made of one severe and radiant word: RADIOACTIVITY."

Under the Tsar of Russia, Marie Curie, in childhood, was denied freedom of thought and action. Because of this, her beloved Poland lost the treasure of her career. In France she was free to follow her scientific psychological bent, but never accorded the financial support she deserved.

When Mrs. William Brown Meloney of New York visited Madame Curie in 1920, it was learned that what she wanted most was "a gram of radium to continue my researches, but I cannot buy it: radium is too dear for me." At this time radium was available for therapeutic use in a number of hospitals and clinics in the United States. Through the cooperation of a group of American women, Mrs. Meloney raised $100,000.00, the price of one gram, and notified Madame Curie — "The money has been found, the radium is yours." She came to America and President Harding presented the gift. The United States' enthusiastic reception of the world's greatest woman scientist is well remembered.

When the World War freed Poland from Russian domination, Madame Curie returned to Warsaw, not for needed rest or recreation, but to establish a radium institute which might serve her beloved people under the newly acquired national freedom of Poland. After the long enslavement under the dictatorship of Russia, Poland was pitifully poor, not only in money, but in scientists and technicians as well. Through general meager sums and many personal sacrifices, brick and mortar passed into walls, but there was no radium. Through Mrs. Meloney, Madame Curie turned again to America. The money was secured and the free people of Poland were accorded the advantages of radium through the generosity of the free people of the United States.

Madame Curie died as she had lived, in simplicity and freedom of spirit.



EDITORIALS

THE PHYSICIAN LOOKS AT POLITICS

Since the earliest days of medicine, the physician has been taught by precept and example to remain aloof from what was said to be the sordid realm of politics. This idealistic advice was good in the old order; in the new, there is some logical argument in opposition to such a plan. It may well be that we are forced by defense or self-protection into a study of the entire situation which today lies in the classification of politics. So complex is this classification, that not alone strictly local situations but also state, national and international politics should concern us.

We have in Oklahoma adequate provisions made by law for the care of the indigent sick. In some instances, particularly as concerns crippled children, this state is far in advance of many others. All Oklahoma physicians are particularly proud of this situation and have from the time of statehood until the present, cooperated whole-heartedly with the constituted authorities, at the expense of great time and effort, to bring about such a condition. Throughout the state many sanatoria have been established for the treatment of tuberculosis; a great University Hospital has been organized and properly staffed and the Crippled Children's Hospital has many associated institutions operating under state and federal funds throughout the width and breadth of Oklahoma. All of these institutions were organized for the care of indigent sick. They are under the financial control of elected representatives of all the people, even physicians. These representatives are the group which is most closely concerned with and whose activities are recognized as political; in short, the politicians. Might we not well look at the method or methods involved in such financial control?

Under the Soldiers Relief Commission of the state, patients have been admitted to the University Hospital for entirely free service, who have been in a financial position to pay for night and day special nurses and whose relatives were able to make a choice of automobiles in order to determine which car the chauffeur is ordered to drive to the hospital.

By executive order an individual has been admitted to the University Hospital for observation and treatment, although he may be in a position to travel to the east or north for confirmation of the diagnosis given him here gratis, under the name of the indigent sick. By virtue of membership in certain select governmental units, of this state, one may receive medical care entirely free — all because Oklahoma has provided so well for the indigent sick.

Under the Crippled Children's Act, adolescent girls suffering acute pelvic pathology are admitted to the Children's Hospital. Under the Crippled Children's Act a distinction is made between congenital defects. Should the unfortunate child have a cleft palate, the surgeon is paid for the care of the patient; should he have a congenital hernia, the surgeon is not paid for the care of the patient.

It has recently been reported, to the writer, that a patient on clinical service at the University Hospital not only demanded but received special nursing care for which they were able to pay. In the name of heaven, gentlemen, are these the Crippled Children and indigent poor that we are providing for!

In the various sanatoria similar abuses are said to exist. Because an individual is able to deliver a few votes at the proper time in the proper manner, he has "political preference." As a result, a friend or relative is immediately taken into a State Sanatorium, regardless of their ability to pay a private physician and irrespective of a long waiting list of indigent sick. Once, in such an institution, it is whispered amongst the attendants regarding certain "connections," which may affect the next year's appropriation and special service is rendered accordingly. Prosperous land-owners, owners of many fertile acres, have been permitted free care and management under the classification of indigent sick.

Unfortunately, this political control, once recognized, has its effect on some who work in such institutions. As an instance, a patient comes in with the story that one physician working for the state in a state institution built and equipped by tax money, did not hesitate to name a fee of five hundred dollars for his personal care in that institution. Later the expected fee was reduced to three hundred and fifty dollars!!! Sic . . . Might this not be explained as a defense mechanism when he sees people coming to the institution, as indigent sick, who are well able to pay.

The Public Health Laboratories, it is understood, are in direct competition with other laboratories in this state. The

latter, in certain instances built over a long period of years, represent the product of individual initiative, long years of training and sound professional practice. They now find themselves unable to underbid the unit of government which they directly support and consequently must see a considerable portion of their work go to the federal or state laboratories.

All of these institutions are supported by public taxation. Perhaps no one group of business or professional men contribute to tax monies in excess to the medical profession. Here then is the situation: We are paying money for the upkeep of institutions and practices which are in a considerable manner taking from us the opportunity to make the money with which to pay the tax, which keeps the doors of such institutions open.

SHOULD THE PHYSICIAN LOOK AT POLITICS?—L. J. Starry.

AN INTERESTING BOOK

Review By

L. S. WILLOUR

"Tuberculosis and Genius", By Lewis J. Moorman, M.D.—University of Chicago Press, Chicago, Illinois.

The author of the last article appearing in this number of the Journal is also the author of this new book which he dedicates to all who have suffered and striven courageously for victory over disease and death.

It is the purpose of this book to renew our acquaintance with those who have met the ascent, successfully surmounted all difficulties including the millstone of affliction. In the introduction he says that in many individuals suffering from tuberculosis there seems to be a strange psycological flair — a phenomenon not fully accounted for, not of established scientific lineage, yet quite evident to the student of clinical tuberculosis.

This book takes up the biography of ten great personages, who, although afflicted with tuberculosis, achieved world recognized accomplishments. These ten great personages are:

Robert Louis Stevenson
Friedrich Shiller
Marie Bashkirtseff
Katherine Mansfield
Voltaire
Moliere
Francis Thompson
Percy Bysshe Shelley
John Keats
Saint Francis of Assisi

This production from the pen of Dr. Moorman is beautifully written and is both entertaining and edifying, giving many intimate instances in the lives of these great people and shows in each instance where the disease from which they suffered failed to thwart their respective activities, but whipped them on to unusual accomplishments.

This book will be of special interest to the Medical Profession of Oklahoma, as Dr. Moorman has served us as President, Delegate to the American Medical Association, and is at this time a member of the Board of Editors of the Journal and as one of us we greatly appreciate this work which he has placed in the hands of the public.

HOW TO VOTE

Vote the way you feel you can best protect the interests of organized medicine and thereby protect your own interests. No political affiliation is comparable with your interest in the profession to which you have pledged yourself and your life's work.

Political preferment appeals to most anyone but protection of the high standards of medicine both from the standpoint of ethics and scientific attainment are much more vital at this time.

Let every man give this matter prayerful consideration and then cast his vote with these problems solved to the very best of his ability.

The members of organized medicine have a special duty to perform at this election.

An abstract of the minutes of the Council meetings of July 12 and September 29 has been prepared, but due to lack of time and space in this issue, the minutes will not appear until the November issue.



• THE PRESIDENT'S PAGE •



In answer to a call of the Oklahoma State Medical Association Medical Preparedness Committee and the county societies' representatives, more than eighty of our members assembled at the Biltmore Hotel in Oklahoma City September 29. Only six county representatives were not present, and in each of the instances of an absentee, a communication was received from the representative stating why he was not present and pledging his every ability at the complete disposal of the Committee.

Appearing before the meeting to discuss the coming mobilization of 1,000,000 men through selective service, were Major Don Welch, Director of the Selective Service Board for Oklahoma, and Major Louis H. Ritzhaupt, state medical officer. Full information concerning the meeting, and the recent meeting of state chairmen with the National Committee of the A. M. A. on Medical Preparedness in Chicago appears in the Organization Section of this issue of The Journal. Every member should read it.

As Oklahoma Representative on the American Medical Association Medical Preparedness Committee, I want to convey to the entire membership of the Association my sincere appreciation of their voluntary interest and cooperation in the Medical Preparedness Program. To the members of the state committee and the county representatives who drove hundreds of miles to attend this meeting, I feel certain that you are now aware of the tremendous task facing the medical profession of Oklahoma and are heartily in accord with the program.

While rapid strides have been made in preparing the profession for any emergency that might arise, there are still many problems to be worked out and much work to be accomplished in the coming months. County representatives will be called upon to give of their time without compensation, yet I have no fear of the response.

Many doctors have as yet not returned their A. M. A. Questionnaire. Let us continue to stress this necessity and point out to every one of our members that, irrespective of his present status as a practitioner, there may be a place for him in preparedness. Let us finish the job. Make Oklahoma one hundred per cent. Complete and mail your Questionnaire TODAY!

Henry N. Turner

President.



ASSOCIATION ACTIVITIES

First Secretaries Conference Planned for October 27

The First Annual Secretaries Conference of the Oklahoma State Medical Association will be held October 27 in Oklahoma City at the Biltmore Hotel.

The conference for the secretaraies is designed to acquaint the county secretaries and the Executive Office of the Association with each other's problems and to formulate plans whereby closer cooperation will be made possible.

The conference will also discuss economic and political problems confronting the profession today, but any actions taken on questions will not be official—rather, only recommendations to be considered by either the Council or the House of Delegates.

Outstanding Speakers

Two oustanding speakers have been invited to appear on the conference program—Harvey T. Sethman, Executive Secretary of the Colorado State Medical Society, and Dr. Holman Taylor, Secretary of the State Medical Association of Texas. Mr. Sethman and Dr. Taylor are two of the outstanding secretaries of state medical associations in the United States and will deliver short discussions on pertinent topics of particular interest to the medical profession and the State Association.

The following interesting program has been outlined and any member of the Association is invited to attend:

Program

FIRST ANNUAL SECRETARIES CONFERENCE

(*All Discussions Start and End on the Big Bell*)

1:00 p.m. Call to order—Opening Remarks.
L. S. Willour, Presiding.

1:10 p.m. Report of Affairs of State Association.
Henry H. Turner, President.

1:20 p.m. Welcome to Secretaries.
Tom Lowry, President
Oklahoma County Medical Assn.

1:25 p.m. Discussion County Medical Society Membership.
John R. Walker, Enid.

1:40 p.m. Discussion County Medical Society Monthly Programs.
J. V. Athey, Bartlesville.

1:55 p.m. County Medical Societies and the Farm Security Administration.
G. G. Downing, Lawton.

2:10 p.m. Hospital Insurance and Medical Service Plans.
W. R. McBee, Director, Group Hospital Service.

2:20 p.m. Medical Preparedness.
Henry H. Turner.

2:35 p.m. General Dicussion.

2:50 p.m. Miss Elsie Borden of the U.S.A.

3:00 p.m. Public Relations—State Medical Association.
L. D. Hudson, Dewey.

3:30 p.m. County Health Units of Oklahoma State Health Department.
Hugh Payne, Oklahoma City.

3:45 p.m. State Insurance Fund.
Mott M. Keys, Director.

3:55 p.m. Oklahoma Public Welfare Department.
Miss Lorraine Ketchum.

4:05 p.m. The Journal.
L. S. Willour, Editor.

4:15 p.m. Business Transactions Between County Societies and Executive Office.
R. H. Graham, Executive Secretary.

4:30 p.m. Election of Permanent Chairman.

4:35 p.m. Round Table Discussion.

6:00 p.m. Dinner.
Permanent chairman presiding.
Entertainment by Oklahoma County Medical Association.

7:00 p.m. Dr. Holman Taylor, Secretary Texas State Medical Association:
"The Necessity of Cooperation Between County Medical Societies and the Executive Office."

7:30 p.m. Harvey T. Sethman, Executive Secretary Colorado State Medical Association:
"The Relationship of the Medical Profession to the Economic and Political Problems of Today."

8:00 p.m. The End.

State Question No. 241 Initiative Petition No. 166

To Appear On The Ballot Nov. 5, 1940.

(Editor's Note: The following discussion of State Question 241, Initiative Petition 166, has been prepared in order that all members of the Association will be advised of the changes it would make in the present Medical Practice Act. The discussion also has been prepared in such a manner that it will be understandable by the laity. Reprints will be mailed to members of the Association as soon as possible.)

State Question No. 241, which will appear upon the ballot November 5, will materially affect the practice of medicine in the State of Oklahoma, as well as the welfare of the people, should it receive a majority vote. In order to continue to protect the health and welfare of the people of Oklahoma, you should give earnest consideration to this proposal.

State Question 241, which is Initiative Petition No.

166, would change the present Medical Practice Act in three respects;

1. Change the make-up of the personnel of the Board of Medical Examiners.
2. Make one change in the definitions of what shall be considered unprofessional conduct.
3. Change the manner in which certain appeals may be taken from the action of the Board of Medical Examiners.

It is the opinion of many that these three changes will materially lower the standards under which the practice of medicine in Oklahoma will be conducted and supervised. In order that the discussion of these three changes will not be confusing, they will be taken up in the order in which they are enumerated.

Personnel of Board

Under the present Medical Practice Act, the schools known as Regular, Eclectic, Homeopathic and Physio-Medic are represented. There are seven members of the Board, and all members are appointed by the Governor. The present Board is made up of 4 Regulars, 1 Eclectic, 1 Homeopath, and 1 Physio-Medic.

The change of this section as provided in State Question 241 is;

> "Within thirty (30) days after the passage of this Act, the members of the Board of Medical Examiners shall be appointed by the Governor from the schools of practice commonly known as the Regular, the Eclectic and the Homeopathic schools, who shall serve for a period of four (4) years or until their successors are appointed and qualified; provided that at no time shall there be a majority of one school represented on said Board; provided further, that no member shall be a stockholder in or a member of the faculty or board of trustees of any medical college or school."

What does this change mean? It means that there must not be a majority of either Regulars, Eclectics or Homeopaths on the Board. This wording, to the layman, appears fair and equitable, yet the record will show how absurd is the proposal. The records of the Board of Medical Examiners reveal that since statehood only 64 Homeopaths have registered, the last one by examination in 1922, and since 1922 only three have been registered by reciprocity, one in 1938, one in 1939, and one in 1940.

The total number of Eclectics registered since statehood is 72. The last one by examination was in 1922, and none by reciprocity in the last five years.

A recapitulation on the number registered from Eclectic and Homeopathic schools since statehood gives a total of 136. Since Oklahoma does not have a re-registration law, it is impossible to determine how many of these 136 are still in the state, but a conservative estimate is that not over 50 per cent still remain. Yet the change contemplated by Question 241 would place a majority on the Board from these two schools to govern over 4,600 Regulars who have registered since statehood, and to examine all future applicants.

Since an initiative petition successfully becoming law cannot be amended by the Legislature, these facts concerning Eclectic and Homeopathic graduates and schools are pertinent since there is a possibility they might make up the majority of the Board. In this respect, look at the records of these schools.

In a letter to Dr. J. D. Osborn, Secretary of the Oklahoma Board of Medical Examiners May 18, 1936, from the Council on Medical Education and Hospitals of the American Medical Association, the following is quoted:

> "There is an eclectic medical school in Cincinnati, but the board of trustees has already DECLARED ITS INTENTION TO CLOSE, AND THERE WILL BE NO MORE STUDENTS ADMITTED. This institution is not approved by this Council or the Association of American Medical Colleges. Its graduates are not eligible for appointment as interns in any hospital that has been approved for intern training. So far as I know, they are not admitted to the licensing examination in any of the states, with the exception of Ohio, Pennsylvania, New Jersey and Massachusetts.
>
> "There are two schools which in the past have been known as homeopathic: Hahnemann Medical School of Philadelphia and the New York Homeopathic Medical School and Flower Hospital. Both of these institutions have declared that they were teaching scientific medicine and that, while they may give some instruction in homeopathic therapeutics, they do not desire to be classed as representing a separate cult or school of medicine. The New York school has asked the legislature to amend its charter by omitting the word "homeopathic" from its title.
>
> "IT WOULD THEREFORE SEEM THAT THERE IS NO LONGER ANY REASON FOR STATES, IN THE REGULATION OF THE PRACTICE OF MEDICINE, TO SET UP ANY SEPARATE STANDARDS OR ADMINISTRATIVE PROCEDURES FOR SECTARIAN SCHOOLS OF MEDICINE. MEDICAL SCIENCE IS ONE, AND IF THE PEOPLE ARE TO BE PROTECTED, ALL OF THOSE WHO ARE LICENSED TO DIAGNOSE AND TREAT ANY FORM OF HUMAN AILMENT SHOULD BE REQUIRED TO MEET A SINGLE EDUCATIONAL STANDARD."

In light of these statements, what will be the situation in Oklahoma when the time arrives when there are no more Eclectics and perhaps Homeopaths to be appointed to the Board of Examiners? Where will future Eclectics and Homeopaths come from when the schools teaching these theories are extinct? Is the State of Oklahoma to be put to the added expense of another petition to revert back to a Board composed of Regular doctors? The absurdity of this change is obvious. As pointed out in the letter from the Council on Medical Education and Hospitals, medical science is one science, and if the people are to be protected, all who are licensed to diagnose and treat any form of human ailment should be required to meet a single educational standard. Can it be that the people of Oklahoma desire to enact into law a statute that would put the control of ANY profession in the hands of less than one hundred and thirty-six persons? Does this not smack of class legislation? Is it American for the minority to govern the majority?

Salesmen to Secure Practice

The second change contemplated for the present Medical Practice Act would legalize the employment in procuring practice of "Cappers" and "Steerers" who, in modern phraseology, should be called salesmen, providing these salesmen are employed by LEGALLY ORGANIZED HOSPITALS AND CLINICS AND THAT SAID ORGANIZATION OF CLINICS OR HOSPITALS SHALL BE MADE ON A MUTUAL OR COOPERATIVE NON-PROFIT PLAN IN CONNECTION WITH SOME RECOGNIZED FARM OR LABOR UNION, OR CHURCH OR CHARITABLE ORGANIZATION.

Under the present Medical Practice Act for Oklahoma, it is unethical for any doctor of medicine to employ salesmen, and there is no state in the United States that has legalized such practice. This restraint upon the doctor of medicine is of his own choosing in order that the public at all times will be protected from charlatans and over-ambitious money-mad physicians or surgeons whose first interest is not the welfare of the patient. The doctors of medicine in Oklahoma do not want this change. Forty-eight states give this protection. Can it be that all forty-eight of the states are wrong and have been since the first Medical Practice Act was enacted into law? Or is there another motive behind this move?

Next, consider what this change would mean to the many towns and cities over the state who have hospitals serving their communities, which are not sponsored by any farm or labor union, or church or charitable organization. What would become of these institutions that have so well served the people in the past? What chance would they have before such unfair competition? Is this an attempt to place all hospitals under regimented control? Is this a regimentation or socialistic measure? Is private business and initiative to vanish? Is price competition to enter the field of sickness and misery and displace the private relations between the patient and the doctor? How much charity would these hospitals do? Who would take care of the people whose circumstances are too meager to even allow them to join an organization? The answer in this case might be the County Commissioners, who by law are supposed to provide care for the indigent. Check your county or your community on this and see how much is available for such care and who eventually stands the cost and provides the care. Does the public realize that the physicians and surgeons of Oklahoma give on the average a minimum of $3,286,500 a year in charity work, and that this figure does not include professional services given to the different public health clinics and the University Hospital?

Appeals From Decisions of Board

The third change concerns the taking of an appeal from the decision of the Board of Medical Examiners. The present Medical Practice Act provides that appeals from the decisions of the Board shall go direct to the Supreme Court. The contemplated change by State Question 241 provides: Appeals from its decisions (the Board) shall be taken to the District Court of the county of the residency of the accused, and appeals from the action of the District Court shall be taken in the same manner as appeals in civil cases generally. Exception to this procedure is made in cases where convictions have become final and the proper legal documents showing such conviction to be absolute in cases of felonies, moral turpitude, or violation of the Federal or State Narcotic Laws.

Since final judgment in all cases lies with the Supreme Court of Oklahoma by appeal from either the accused or the Board of Examiners, should there be any delay in a final hearing for a physician or surgeon who for one reason or another may be preying on the public? Here again is added expense and unnecessary delay. Can it be that there are people in Oklahoma who do not believe that the Supreme Court of Oklahoma would give a fair trial without first having a District Court try the cases on some charge? Should court costs be made more burdensome for the applicant, who might in some cases be unable to stand the expense of so many appeals?

Therefore, the questions to be decided are whether the peole of Oklahoma will vote to tear down the structure that will allow the majority to rule themselves or give that right to the minority; whether salesmen will be allowed to enter the field of health to assist a few hospitals at the expense of the many, and to fetter the procedure under which the public will be protected from doctors of medicine who might follow a practice not to the best interests of society. If you desire to keep the standards of medicine in line with the standards desired by the people of all forty-eight states, now is your chance to indicate your desire.

The Okfuskee-Okmulgee County Medical Society met September 16 in Okemah. Speakers and their subjects of discussion were: Dr. Earl McBride, "Injuries of the Knee Joint"; Dr. Howard Shorbe, "Fractures Abont the Elbow"; and Dr. William K. Ishmael, "Recent Advances in the Treatment of Arthritis." All three physicians are from Oklahoma City. The dinner meeting was held at the Okemah Hotel.

Clinical Society Opens Annual Four-Day Session October 28

Physicians of the Southwest, and profession representatives from other parts of the country, will be offered another series of intensive clinics and lectures covering the most important fields of medicine, surgery, and the specialties when the Oklahoma City Clinical Society opens its tenth annual conference at the Biltmore Hotel in Oklahoma City October 28.

Seventeen guest lecturers, recognized leaders in their respective fields, will be present for the four-day session. Included in the distinguished roster will be Dr. Nathan B. Van Etten of New York, President of the American Medical Association. Dr. Van Etten will be the guest of honor and principal speaker at a banquet on Monday night, October 28, at which the Oklahoma County Medical Association will be the host group. Members of the Clinical Society will be guests.

As has been customary in years past, the Oklahoma City Chamber of Commerce will assist with registration and will entertain the Clinical Society and guests with a dinner-dance at the C. of C. Tuesday night, October 29. The annual stag party will be held at the Oklahoma Club on Wednesday night, October 30.

A full program of post graduate courses, general assemblies, roundtable luncheons and entertainment features has been planned for the conference, and because of the yearly increase in interest by visiting physicians, the conference committee is making plans for entertaining the largest attendance in the ten-year history of the meetings. Inquiries, indicating widespread interest, have been received from every section of the nation.

Visiting doctors — associate members of the society — are urged to bring their wives, as a round of entertainment for them also will be arranged, with the Women's Auxiliary of the County Medical Association as hostesses.

The first fall meeting of the Washington-Nowata County Medical Society was held September 11 at Memorial Hospital in Bartlesville, with Dr. O. I. Green, president, presiding. Dr. S. A. Lang of Nowata read a paper on "The Medical Aspects of the Chronic Gall Bladder," after which a general discussion was held.

Dr. G. L. Johnson of Pauls Valley has been appointed Department Surgeon for the American Legion in Oklahoma. The appointment was made by Randall S. Cobb, newly elected Department Commander.

Dr. R. M. Howard, and Mrs. Howard, have returned from an extended cruise to the South Sea Islands. Their longest stay was at Tahiti. En route home, they spent a week in Honolulu.

Dr. H. F. Vandever, Enid, has been named acting city health officer for Enid, replacing Dr. R. C. Baker, the major in command of the medical detachment of the 189th Field Artillery who left September 24 for a year's active duty.

The Muskogee County Medical Society has announced the departure of four members of the society to the defense forces of the country. They are Maj. R. N. Holcombe, Capt. I. C. Wolfe, Capt. George L. Kaiser, and Capt. Carson L. Oglesbee.

Dr. H. B. Kniseley, and Mrs. Kniseley, have returned to their home in Norman after four months spent in various cities in California. At Vista, Calif., they visited with Dr. James J. Gable, formerly of the Central State Hospital at Norman.

New commander of the district seven organization of the American Legion is Dr. J. B. Hollis of Mangum. Dr. Hollis' election came after a long period of active service in Legion activities.

Prerequisite to Pneumonia control—
Type the invading organism!

PNEUMONIA TYPING SERA (Rabbit)

Lederle

Containing *Stabilized* Blue Dye which improves practicality of the Lederle Typing Sera

REGARDLESS of the therapeutic measure adopted, whether it be chemotherapy alone, chemotherapy plus specific serum, or specific serum alone; an accepted principle in pneumonia control is first to take sputum samples for determining the type of pneumococcus. The accepted method of typing is based upon the accurate and rapid Neufeld or "Capsular swelling" reaction.

To further enhance the convenience and practicality of typing sera, Lederle has added a stable blue dye which, unlike the methylene blue in the former sera, does not lose its staining ability. The presence of the stabilized dye is a time saver for the technician and avoids irregularities of dilution which must be expected when the technician adds his own methylene blue to clear serum.



"Pneumococcus Typing Sera *Lederle* (Rabbit)" with blue dye added are available for types 1 to 33 in 1.0 cc. vials, and in packages of 5 capillary tubes for individual tests.

To reduce conveniently the number of tests, combinations are offered as follows:

Mixture "A"—containing Types 1, 2, and 7.

Mixture "B"—containing Types 3, 4, 5, 6, and 8.

Mixture "C"—containing Types 9, 12, 14, 15, 17, and 33*.

Mixture "D"—containing Types 10, 11, 13, 20, 22, and 24.

Mixture "E"—containing Types 16, 18, 19, 21, and 28.

Mixture "F"—containing Types 23, 25, 27, 29, 31, and 32.

*Note the inclusion of Type 33!

Also available in packages of 5 tests, in 5 capillary tubes, and 1.0 cc. vials,

"B. Friedlander Typing Sera *Lederle* (Rabbit)"

For monovalent types A and B
Containing *Stabilized* Blue Dye

LEDERLE LABORATORIES, INC.
30 ROCKEFELLER PLAZA NEW YORK, N. Y.

News From The State Health Department

"Doing things to people is often easy, but it is expensive and of temporary benefit; showing people how to do things for themselves may take a little time, but it is relatively inexpensive and its results are lasting; moreover the people are strengthened by the latter process and weakened by the former," Dr. C. E. Turner, Massachusetts Institute of Technology, declared in an address which highlighted the fifth annual convention of the Oklahoma Public Health Association in Tulsa early in October.

Doctor Turner, professor of biology and public health, discussed the "Trend of School Health Education," in which he made a plea for intelligent cooperation in an instructive, learning program of health education, helped by both the schools and public health officials.

"Man's natural desire to relieve suffering and the clinical approach to public health problems have commonly resulted in the expansion of treatment programs which might be extended to consume the whole national budget without achieving their objective; the great hope for public health within budgetary limitations lies in securing more healthful living on the part of the people," Doctor Turner said.

"Our goal is not a country of tax paid health specialists individually escorting a citizenship of morons through a feeble-minded Utopia. On the contrary, we desire a virile, intelligent, secure citizenry using to the best advantage a superior and intelligent medical profession, with a generous government caring for that irreducible minimum of citizens who cannot maintain economic independence," he said.

The educator says, "The whole child goes to school," and he is definitely concerned with every child's health as he tries to advance him toward worthy citizenship.

The objectives of health departments and school departments demand for both a program of health education, and the last few years have seen expanding and improved programs in school health education and public health education.

The health department has made all of its services educational, and it has planned an organized educational program which reaches the expectant mother and which is concerned with the individual from infancy on, he stated.

The schools and the health department should work together in health education and the program should deal with real problems and use community resources toward their solution. The program must be fitted into the whole school curriculum. There must be local adaptation in the community, in the classroom and to the individual child. Teachers must be encouraged to accept a proper degree of responsibility and to use a suitable amount of initiative. The teacher much be given help, but not rigid procedures, Doctor Turner declared.

Such a cooperative program calls for team work, the administrators and specialists in public health and in education must come to understand each other's viewpoint, peculiarities, special interest, particular skills and contributions as well as objectives.

"In practical terms, it means some sort of joint committee or joint council for cooperative planning.* * * Experts in both education and public health can work together if the importance of the goal is great enough to produce necessary tolerance, willingness to forego individual pride of authorship and a willingness to work jointly as a group on a cooperative or interdepartmental project," he said.

Doctor Turner's address was heard by many Oklahoma school officials, who later discussed the possibility of forming a general school health program in this state.

Other nationally known speakers during the two-day convention included Miss Katharine Lenroot, Chief of the Children's Bureau, U. S. Department of Labor, and Dr. Nathan Sinai, professor of public health and hygiene at the University of Michigan.

About 300 public health workers, school authorities and others attended the meetings.

Dr. Henry Turner, Oklahoma City, president of the Oklahoma State Medical Association was the principal speaker at the banquet, discussing "Public Health, a New Essential to Medicine."

Four additional changes in the administrative staff of the Oklahoma State Health Department were announced recently by Dr. G. F. Mathews, Commissioner.

Dr. John F. Hackler, who recently returned from a year's study at Johns Hopkins University School of Public Health, has been named director of the Advisory Field Staff. He succeeds Dr. John Shackelford, who is now devoting his full time to the position of director of local health services.

Dr. William A. Loy, director of the Carter County Health Department at Ardmore, is away for a year of study at the Harvard University School of Public Health. Dr. W. M. Mead is directing the county health department.

Dr. Harry E. Barnes, director of Cooperative Health District Number Five, Tahlequah, is also on a year's leave of absence of study, at the Johns Hopkins University School of Public Health. Dr. Isadore Dyer, of the health district staff, is acting director.

William Wyatt, state milk specialist, is at Michigan University for a year's study.

• *OBITUARIES* •

Dr. William James Jolly
1848-1940

Long years of active service in the practice of medicine came to an end for one of Oklahoma's oldest practicing physicians when death claimed Dr. William James Jolly September 24 in Oklahoma City.

Dr. Jolly died of a heart attack, collapsing on the front porch of his home a few minutes after treating a patient. He was 92 years of age and had continued actively in his profession until the time of his death.

A native of North Carolina, Dr. Jolly was a graduate of the Medical College of the State of South Carolina in Charleston, receiving his degree in 1882. He came to Oklahoma in 1890, living in the state the rest of his life, except for three years in McMinnville, Tenn.

A former Dean of the University of Oklahoma School of Medicine, Dr. Jolly was one of its first professors, and was one of the organizers of the Oklahoma County Medical Association, of which he served at one time as president. His specialty was eye, ear, nose, and throat. He was a Mason and Shriner, and a member of St. Luke's Methodist church in Oklahoma City for many years. He also was a member of the American College of Surgeons.

Last rites were conducted from the chapel of Street and Draper Funeral Home September 28, and interment was in Memorial Park cemetery.

Dr. John I. Gaston
1877-1940

Dr. John I. Gaston, well-known Shawnee physician, succumbed to an illness of heart trouble September 24 in a Shawnee hospital where he had been critically ill since September 10. He was 62 years of age.

Dr. Gaston was born in West Union, Ohio, and studied

medicine at the University of Tennessee. He pursued his studies later in London and Edinborough.

Dr. Gaston practiced medicine in Madill about twelve years before moving to Shawnee thirteen years ago. During his residence in the latter city he had been county medical officer.

He was a member of the First Presbyterian Church in Shawnee, the Kiwanis club, and was an active member of the Pottawatomie County Medical Society.

Surviving are his wife; a stepson, Dr. William B. Mullins of Shawnee; a sister, Mrs. R. A. Behm of Decator, Ga.; and two brothers, N. D. Gaston of Chicago, and Charles Gaston of Seamon, Ohio.

Funeral services were held September 27 in the Gaskill Chapel in Shawnee, with Dr. Chris Matheson officiating. Interment was in the Fairview mausoleum.

Dr. John O. Hudson
1885-1940

Death claimed a well-known member of the Oklahoma State Medical Association when it came to Dr. John O. Hudson of Braman, Friday afternoon, September 27, after a lingering illness. He was 54 years of age.

Dr. Hudson was born at Blountsville, Ala., on December 20, 1885. He lived in Copan and practiced medicine there for a number of years, moving later to Bartlesville where he was proprietor of a drug store for several years. Leaving Bartlesville, he went to Marland where he practiced medicine for a few years, then moved to Braman in 1928, where he lived until the time of his death.

Dr. Hudson was a charter member and charter director of the Bartlesville Kiwanis Club. He was a member of the Methodist church, the Masonic lodge, and the I. O. O. F., Royal Neighbor, Modern Woodmen, and Woodmen of the World lodges.

Surviving are his wife; a son, Frank; one brother, Dr. L. D. Hudson of Dewey; and three sisters, Mrs. E. O. McCord of Gadsden, Ala., Mrs. R. F. Ashley of Odenville, Ala., and Mrs. Gilmore of Algoa, Texas.

Funeral services were conducted from the Methodist church at Braman on Monday, September 30, with the Rev. Fred Stolz, pastor officiating. Interment was in the Sunnyside cemetery at Caney, Kansas.

Dr. Daniel M. Randel
1866-1940

Dr. Daniel M. Randel, 74, pioneer Oklahoma physician, succumbed Wednesday night, September 4, in an El Paso, Texas, hospital. Death was caused by arteriosclerosis.

Dr. Randel was born June 2, 1866, in Tennessee. He was graduated from the St. Louis College of Physicians and Surgeons in 1889, and came to Oklahoma, where he began the practice of medicine shortly thereafter. He located at Muskogee, and for several years was the only eye, ear, nose and throat specialist in Indian Territory. He moved to Okmulgee in 1917, where he was actively engaged in his specialty until 1932, when he retired from practice.

Dr. Randel was a member of the Presbyterian Church, and was affiliated with Masonic bodies and the Elks.

Surviving are his widow; two sons, Dr. Brown W. Randel of El Paso, and Dr. Harvey O. Randel of Oklahoma City; and four sisters.

Funeral services were held in El Paso on September 6, and burial was in the Masonic Cemetery in that city.

Dr. R. W. Lewis, medical advisor at the Western Oklahoma Charity Hospital in Clinton for the past two years, has resigned his position and is planning to move to Granite, where he will open a small hospital within a few months. Dr. Lewis and his family came to Clinton from Westbourne, Tenn.



AS "the Derby" determines the winner among equestrian thoroughbreds, so each meeting of the Southern Medical Association becomes more established as a consistent winner among the thoroughbred medical meetings. See another winner when the Southern Medical Association meets in Louisville, Kentucky, November 12-15, 1940.

MEDICALLY, there may be expected the usual fine programs and entertainment that distinguish the annual meetings of the Southern Medical Association from the others. Ten general clinical sessions, nineteen sections, the three independent medical societies meeting conjointly, and outstanding scientific and technical exhibits are assurance that every phase of medicine and surgery will be available.

REGARDLESS of what any physician may be interested in, regardless of how general or how limited his interest, there will be at Louisville a program to challenge that interest and make it worth-while for him to attend.

ALL members of state and county medical societies in the South are cordially invited to attend. And all members of state and county medical societies in the South can be and should be members of the Southern Medical Association. The annual dues of $4.00 include the Southern Medical Journal, a fine publication recognized as a valuable instrument to physicians of the South in the pursuit of their professional careers.

SOUTHERN MEDICAL ASSOCIATION
Empire Building
BIRMINGHAM, ALABAMA

University of Oklahoma School of Medicine

The School of Medicine started classes on September 16th, with 235 students enrolled as follows:

Freshmen	63
Sophomores	62
Juniors	56
Seniors	54

The Admissions Committee considered a total of 176 applicants, of which 161 were for admission to the first year class, and 15 were for admission to advanced standing from the other medical schools. Two applicants for admission to advanced standing were accepted for admission to the second year class. A total of 68 residents and 5 non-residents were accepted for admission to the first year class. Due to financial difficulties and other reasons, only 59 residents and 4 non-residents accepted their appointment to the first year class.

It will be noted that a total of 73 were accepted for the first year class when the enrollment is limited to 65 students. Several who were approved for admission at the June meeting of the Admissions Committee declined the appointment and all vacancies were filled at the September meeting. No alternates were selected as all the applicants who had met all the requirements for admission had received approval for admission.

A total of 48 counties were represented by 118 applications by residents of the State of Oklahoma. The 59 residents actually enrolled in the first year class came from 34 counties.

Students enrolled in the first year class are as follows:

George Mullins Adams, Hominy; James Leon Alexander, Ardmore; Thomas Page Anderson, Anadarko; Eugene Hamlin Arrendell, Ponca City; Jack Duane Ballard, Tahlequah; Merrill Simpson Bartlett, Ada; Joseph Price Bell, Welch; Charles David Bodine, Oklahoma City; Clifford Alton Brown, Comanche; George MacMillan Brown, Jr., McAlester; Herschel Gray Carter, Tulsa; Richard Robbins Casady, Oklahoma City.

Samuel Lewis Cohen, Oklahoma City; Julian Harold Conn, Davis; Everette Ellis Cooke, Ponca City; Evan Leonard Copeland, Oklahoma City; Glenn Wendell Cosby, Buffalo; Marvin LeRoy Cullen, Woodward; Clarence Benton Dawson, Muskogee; John Junior Donnell, Oklahoma City; Phillips Raymond Fife, Guthrie; Safety Reuel First, Crescent; Herman Floyd Flanigin, Talala; William Forrest Fluhr, Oklahoma City.

Virgil Ray Forester, Shawnee; Clifford Felix Gastineau, Vinita; Rene Gabriel Gerard, Chickasha; Thomas Elward Getchius, Norman; Donna Lea Hammer, Enid; Robert Perry Holt, Binger; Jack Van Doren Hough, Centrahoma; Dick Howard Pyeatt Huff, Norman; Kenneth B. Kincy, Drumright; William Casper Kite, Jr., Oklahoma City; Milton Klebanoff, Yonkers, N. Y.; William Ewart Knight, Madill; Richard Benjamin Lincoln, Tulsa; John Aubrey McIntyre, Tryon.

Stanley W. Meeks, Canadian, Texas; Armon M. Meis, Enid; James Hal Neal, Tulsa; Marshall Opper, Altus; William Lee Rector, Jr., Ardmore; Dorothy Christine Reese, Sapulpa; Earl Moore Robinson, Quaker City, Ohio; Louis Stong Rockett, Ardmore; Harold Ray Sanders, Hobart; James Ronald Smith, Kingfisher; Arthur Waldo Stickle, Oklahoma City; Clinton Riley Strong, Clinton; James Frederick Tagge, Enid; Fred Wilbur Taylor, Anadarko.

Willard Van Voorhis Thompson, Oklahoma City; William Best Thompson, Clinton; Jack Burgess Tolbert, Edmond; Henry Constantine Trzaska, South Ozone Park, N. Y.; Edwin Charles Turner, Sayre; Ethan Allen Walker, Oklahoma City; Carroll Melvin White, Tulsa; Rhonald Alven Whiteneck, Enid; George Louis Winn, Oklahoma City; Jones E. Witcher, Mangum; Iris Grace Yeargen, Hollis.

Group Hospital Service News

GROUP HOSPITAL SERVICE HONORED

The American Hospital Association, Commission on Hospital Service at a recent meeting in Boston, Massachusetts, formally and officially approved Group Hospital Service, the Oklahoma Plan.

Members of the Commission, a division of the American Hospital Association are: Basil C. MacLean, M.D., Chairman, C. Rufus Rorem, Ph.D., C.P.A., Director, R. C. Buerki, M.D., S. S. Goldwater, M.D., and Rt. Rev. Msgr. Maurice F. Griffin.

Announcement of the approval was made to the office of Group Hospital Service in Tulsa by C. Rufus Rorem, Director of the Commission. The approval is based on compliance with established standards governing method of organization, operation and accomplishments over a six months' period. Some of the salient provisions of these standards established by the Commission are that:

1. No private investors should advance money in the capacity of stockholders, or owners. Initial working capital may be provided by individuals, hospitals, chests, councils or other civic agencies, but should be repayable only out of earned income, over and above operating expenses, payments to participating hospitals and legal reserves.

2. Opportunity should be given for all institutions of standing in each community to become participating hospitals and subscribers should have free choice of hospital and physician at the time of sickness.

3. The benefits be guaranteed through contracts with "member hospitals," which assume the ultimate responsibility to provide services, in accord with definite contracts with subscribers and the hospital service plan.

4. Benefits to subscribers be guaranteed through "service" contracts with member hospitals as opposed to cash indemnification contracts for hospital expenses.

5. A majority of the hospitals in each area where a hospital service association enrolls subscribers should be member hospitals.

6. Participating hospitals be approved for membership by an appropriate state regulatory body.

7. Arrangements be made for provision of service in non-member hospitals in case of emergency.

8. Initial working capital should be sufficient to carry all acquisition costs and operating expenses for a stated period (e.g. six months), after contracts first become effective, thus making earned income available in full for payments to hospitals during this period. Financial statements of operations and condition should be prepared by certified public accountants at regular intervals, at least annually. Other miscellaneous provisions are included.

Through 135 firms and organizations, the Oklahoma Plan has extended its protection to 8400 persons. It has paid hospital bills for 150 of its members.

The Plan operates without profit and its 21 trustees, including the officers, serve without remuneration. It is the 61st plan to receive the approval award. It is designed to serve the entire State of Oklahoma. These plans have extended their protection to approximately 6,000,000 persons.

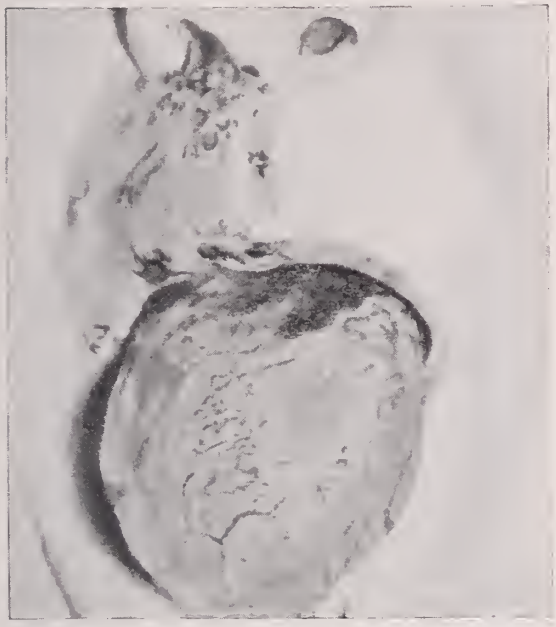
Group Hospital Service, the Oklahoma Plan, is now the only hospitalization plan in the state to have the individual or joint approval of the Oklahoma State Medical Association, the Oklahoma State Hospital Association and the American Hospital Association.

The officers, trustees and staff of Group Hospital Service unanimously extend their recognition, thanks and appreciation to the members of the Oklahoma State Medical Association for their help and cooperation which contributed immeasurably to this accomplishment and attainment.

STUDIES IN THE AVITAMINOSES



This page is the tenth of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the September 14 issue of The Journal of the American Medical Association.



Photograph courtesy of C. P. Rhoads, M. D., Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York City.

The Glossitis of PELLAGRA

The glossitis of pellagra is usually among the early symptoms. It is manifested initially by hyperesthesia, which frequently develops before objective signs. As the deficiency state becomes more pronounced, desquamation of the superficial epithelium gives the tongue a beefy red, smooth, dry appearance. During desquamation, secondary infection with Vincent's organisms or Monilia frequently occurs, producing a thick white or yellow coating which ultimately is shed. The tongue becomes swollen, and fissures and aphthous ulcers develop on its surface. The inflammatory process spreads to the buccal mucosa, the gums, the lips and the pharynx, producing superficial ulcerations in these areas.

The Dermatitis of PELLAGRA

The skin lesions of pellagra are considered one of the diagnostic signs; they are seen on the hands, neck, under the breasts, on the perineum, and on the legs. They usually are bilateral and are sharply demarcated from the surrounding normal skin. At first the involved area becomes erythematous and tender, resembling a mild sunburn. The skin is tense and swollen; itching and burning may be severe. At this stage vesicles or bullae frequently appear. After a period of weeks or months, the edema subsides, the erythema disappears, and the involved skin may assume a more normal appearance. Residual pigmentation persists, however, especially about the hair follicles.



Illustration courtesy of Henry Field, Jr., University of Michigan Medical School, Ann Arbor.

UPJOHN

Railroad Offers Itineraries To Southern Medical Meeting

Through the efforts of Louisville and Nashville Railroad Company, a complete train schedule including two different routings to the Southern Medical Association meeting in Louisville, Ky., on November 12-15, has been made available for the members in Oklahoma.

Should you desire further information concerning these itineraries address your correspondence to either Mr. G. E. Herring, Division Passenger Agent, Louisville and Nashville Railroad Company, St. Louis, Mo., or your Association's office, 210 Plaza Court, Oklahoma City.

ACCOMMODATIONS VIA ST. LOUIS

Lv. Oklahoma City—Frisco R.R.			5:45 p.m.
Lv. Tulsa			8:35 p.m.
Ar. St. Louis			8:00 a.m.
Lv. St. Louis—L.&N. R.R.	8:15 a.m.	or	10:50 p.m.
Ar. Louisville	5:00 p.m.		7:05 a.m.
Lv. Louisville—L.&N.R.R.	7:45 a.m.	or	11:05 p.m.
Ar. St. Louis	4:45 p.m.		7:45 a.m.
Lv. St. Louis—Frisco R.R.	6:30 p.m.	or	11:57 p.m.
Ar. Tulsa	(1) 5:20 a.m.		10:10 a.m.
Ar. Oklahoma City	8:10 a.m.		1:05 p.m.

(1) Occupy sleeper until 8:00 a.m.

ACCOMMODATIONS VIA MEMPHIS

Lv. Okla. City—Rock Is. R.R.	5:15 p.m.	or	6:20 a.m.
Ar. Memphis	6:45 a.m.		7:30 p.m.
Lv. Memphis—L. & N. R.R.	8:15 a.m.		9:15 p.m.
Ar. Louisville	5:10 p.m.		7:10 a.m.
Lv. Louisville—L. & N. R.R.	11:05 a.m.	or	9:40 p.m.
Ar. Memphis	8:50 p.m.		7:30 a.m.
Lv. Memphis—Rock Is. R.R.	11:00 p.m.		8:30 a.m.
Ar. Okla. City	12:40 p.m.		9:48 p.m.

Reduced round-trip railroad fares are effective from all points in Oklahoma to Louisville; tickets are on sale daily with 30-day return limit; stop-overs permitted at all points en route; diverse routes are permissible. Thus members from Oklahoma City could travel via Memphis, Tenn., on the going journey and via St. Louis returning, or vice versa. Pullman fares are additional.

The round-trip railroad fare from Oklahoma City (applicable via Memphis or St. Louis) is $37.30; from Tulsa (via St. Louis), $32.00; proportionately reduced fares from all other points.

Pullman and dining car service is available between Oklahoma City and St. Louis on all trains; Pullman cars operate between St. Louis and Louisville overnight, but only coaches on the daylight trains. All equipment is air-conditioned. Lower berth Pullman fare between Oklahoma City and St. Louis, each direction, is $4.20; Tulsa and St. Louis, $3.70; St. Louis and Louisville, $2.65.

Overnight trains have Pullman service between Oklahoma City-Memphis, and Memphis-Louisville; L. & N. daylight train in each direction is the "Pan-American" and offers Pullman parlor-car service. There is dining car or cafe car service for all necessary meals enroute. All equipment is air-conditioned. Lower berth Pullman fare between Oklahoma City and Memphis is $3.95; Memphis and Louisville, $3.15; Parlor seat between Memphis and Louisville is $1.60.

The Rock Island schedules may change materially previous to the convention, and the local representatives should be contacted for exact figures.

Dr. Paul Dube arrived in early August to join the staff of the Newman Clinic in Shattuck. An orthopedic surgeon, Dr. Dube has spent two years doing research work in orthopedics at the Rush Clinic in Chicago, Ill. Three years in the practice of orthopedic surgery were spent at the Crile Clinic in Cleveland, Ohio.

Southern Medical Meeting In Louisville In November

The latter part of this month, members of the Oklahoma State Medical Association and other physicians of the South who are members of their state and county medical societies will receive preliminary programs of the thirty-fourth annual meeting of the Southern Medical Association.

The value of this meeting needs no amplification since most natives recall the splendid way in which the Oklahoma City meeting of this Association was consummated in 1938.

The program of essayists on each of the nineteen sections is assurance that the field of medicine in its entirety is to be well covered. Another contributing factor to the success year after year of Southern Medical meetings are the consistently numerous and well prepared scientific exhibits, each year becoming more popular because those attending the meetings are permitted personal contact with the authors of the work.

Technical exhibits as presented at these meetings offer a departure from the usual shows as seen at other large medical meetings in that strides are being made to encourage the exhibitors to dignify the presentation of their products and services.

These things, together with that wholesome friendly atmosphere unknown to other large meetings, and the other diversions, are the basis for having every Oklahoma physician plan now to be at Louisville, November 12-15, for the Thirty-Fourth Annual Meeting of the Southern Medical Association.

Medical Groups Sponsor Fine Joint Meeting In Shawnee

A joint meeting of the Southern Oklahoma Medical Association and the Four County Medical Association, with the Pottawatomie County Medical Society as host, was held in Shawnee at the Aldridge Hotel Thursday, September 26.

Dr. C. S. McMurray of Nashville, Tenn., and Dr. Wann Langston of Oklahoma City were the principal speakers on the scientific program. Dr. McMurray spoke on "Female Sex Hormone Therapy" and "Cancer of the Cervix." Dr. Langston's discussions were "Differentiation of Anemias" and "Circulatory Emergencies." The Thursday afternoon program was exceptionally well-attended.

Dr. Henry H. Turner, President of the Oklahoma State Medical Association, and Dr. Louis H. Ritzhaupt, State Medical Officer, spoke at the evening banquet on the Medical Preparedness Program of the American Medical Association and the coming part that the medical profession in Oklahoma would play in the selective service draft.

Dr. A. C. McFarling and Dr. William Gallaher composed the program committee. These two organizations are to be complimented on the fine program they sponsored.

VITAMIN-FREE FOODS FOR RESEARCH!

A recent announcement by the Research Laboratories of the S. M. A. Corporation reveals that they are now in a position to provide vitamin-free casein and other vitamin-free foods for experimental purposes to researchers who have previously been obliged to manufacture these items for private use.

For many years the S. M. A. Corporation has been producing these foods exclusively for use in their laboratories. Now, with the expansion of their own facilities and the realization of the convenience to others engaged in laboratory work this offer is made to provide vitamin-free diets at an exceptionally reasonable cost. Quantities of one, five, ten or 100 pounds or more may be ordered directly from the Research Laboratories, S. M. A. Corporation, Chagrin Falls, Ohio.

Opportunities for Practice

An exceptional opportunity for practice has been communicated to the Executive Office of the Association. The location is in a city of approximately 2,500 people, having a drawing territory of around 10,000, and is in the heart of a prosperous agricultural region.

Every assistance will be given the physician locating. For full particulars, write the Association office, 210 Plaza Court, Oklahoma City.

Notice has been received that there is considered to be an excellent opening for a young physician to practice in Comanche, Oklahoma. It is stated that it is possible that a certain citizen there would help to build a good hospital and give him half interest in it if he locates in that town.

Comanche is a town of 1,900 population with a surrounding area of about 10,000.

Any physician interested should communicate with Mr. A. N. Harley, Comanche, Oklahoma.

Word has come to this office from Braman of the need of a suitable physician in that town, preferably a well-trained, young man. The only practicing physician in Braman died a short time ago, leaving the town without a doctor. Braman has a population of a little over 500, with a good agricultural community surrounding it. There also is much oil in this vicinity. According to the communication, the community is willing to furnish the right person a good office free of expense to him. For further information, communicate with Mr. D. E. Pinney, Braman banker, or the offices of the State Medical Association.

Mr. W. R. Fulton, Superintendent of the Hammon Public School, Hammon, Oklahoma, has advised that there is an opening for a young physician to enter practice in that town (population, 800) and surrounding farm territory.

An opportunity for practice exists for a young physician in Seiling, Oklahoma, population 850. Anyone interested should contact Mr. H. S. Bivens of that town.

Mental Hygiene Consultation Service Started

The U. S. Public Health Service has established a new office, that of mental hygiene consultant to the states, for the purpose of encouraging and giving aid in the organization of state mental hygiene programs, with Passed Assistant Surgeon Victor H. Vogel in charge. Mental health projects will be recognized as approved objects for expenditure of Title VI Social Security funds allocated to state health departments for the extension of public health work.

Outstanding Program Presented at Southeastern Meeting

An instructive and well-rounded program of scientific papers was presented at the meeting of the Southeastern Medical Society in Durant Thursday, October 17. The meeting, held in the Durant Municipal Auditorium, was attended by a large number of physicians from that part of the state.

A luncheon at noon at the First Methodist Church followed the morning session, at which Dr. W. A. Tolleson, President of the Society, presided. Dr. John A. Haynie of Durant gave the welcome address and Dr. Finis Ewing, President-Elect of the Oklahoma State Medical Association, addressed the physicians on "Your and My Medical Society."

The scientific program included the following discussions:

"Heart Failure"—Dr. J. T. Wharton, Durant.

"Mineral Oil in Pre- and Post-Operative Cases"—Dr. Paul C. F. Vietzke, Indian Hospital, Talihina.

"Clinical Cancer"—Lantern Slide Demonstration—Dr. E. D. Greenberger, McAlester.

"Urinary Antiseptics"—Dr. S. D. Neely, Muskogee.

"Skin Diseases"—Lantern Slide Demonstration—Dr. John H. Lamb, Oklahoma City.

"Pneumonia"—Dr. R. Q. Goodwin, Oklahoma City.

Northeastern Medical Society To Meet October 22

The Northeastern Oklahoma Medical Association, incorporating county medical societies of the eighth councilor district, will hold a one-day meeting in Tahlequah on October 22, according to Dr. Isadore Dyer, Secretary of the Cherokee County Medical Society, who will serve as hosts. Sessions will be held at the W. W. Hastings Indian Hospital in the evening.

Highlighting the day's program will be "open house" ceremonies at the hospital and a dinner to be given at the Thompson Hotel. Although speakers had not been definitely announced at presstime, it was thought that a representative from Washington University at St. Louis would be a featured speaker.

Approximately 100 physicians are expected to be present for the meeting, it was announced. Counties to be represented are Cherokee, Muskogee, Okmulgee, Wagoner, Ottawa, Sequoyah, Adair, Delaware, Mayes, and Craig.

The association, to which Dr. Wylie G. Chesnut of Miami is President, meets three times a year, the last session having been held at Miami. Dr. H. A. Scott of Muskogee is Vice-President and Dr. W. Jackson Sayles of Miami is Secretary.

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MEDICAL PREPAREDNESS

State Representatives' Conference On Medical Preparedness

On September 20, 1940, the chairmen of the Medical Preparedness Committees of various states met with the National Committee on Medical Preparedness at the American Medical Association headquarters in Chicago. Only one state was not represented. Representatives of the Army and Navy, Public Health Service, and the Selective Service Board were present. Dr. Irvin Abell, chairman of the National Committee on Medical Preparedness, and who has also recently been appointed by President Roosevelt as chairman of the Coordinating Committee for Medical Preparedness to the Committee on National Defense, was unable to attend on account of illness, but sent a telegram in which he stated: "Since the A. M. A. has voluntarily assumed the responsibility for surveying the qualifications and availability of the medical personnel of the country, nothing should be allowed to interfere with the successful and prompt fulfillment of this self-imposed obligation. In the degree in which we succeed we shall be judged, and our responsibility to the American Medical Association demands 100 per cent fulfillment. Such states as are in arrears should be made to realize their duty and, if necessary, change in committee personnel made to give some assurance of discharge and fulfillment of duties assigned."

A resume of the minutes of the meeting will not be given here, as they will have appeared in the Journal of the American Medical Association before this goes to press. However, I may say that almost any question which might occur to a medical man was fully answered. Among the topics discussed were: Draft Boards and Medical Examiners; Physical Examining Boards at Recruiting Centers; Exemption of Medical Students, Interns and Residents from Provisions of Selective Service Draft Bill; Rejections by Draft Boards; Relations of Committee on Medical Preparedness to Official Governmental Agencies: Adoption of Plans to Secure Return of Schedules; Specifications that Must Be Met and Observed by Physicians Chosen to Serve on Examining Boards; Design for Certificate and Badge for Use of Physicians Doing Patriotic Service for the Government.

It was made quite evident that governmental agencies pertaining to the armed forces expect the American Medical Association through its Medical Preparedness Committees to aid in the mobilization of the medical personnel. Though the function of the Committee is purely advisory, such as the National Research Council, it will be considered of sufficient importance by the Government to warrant the Surgeon Generals' having representatives on duty with the Committee so that they may give official sanction to the recommendations made by this Committee, which in turn will be transmitted to the state and county medical societies.

Obviously then, if the Government is depending on us for this aid, our first duty is to see that the Medical Preparedness Committee has at hand the information desired by these officials. This can only be accomplished by every member of the Oklahoma State Medical Association completing and sending to the American Medical Association the schedules or questionnaires of the Medical Preparedness Committee. Please do your part in aiding the mobilization of the medical profession. Let us be prepared for any eventuality.—H. H. T.

Note: Please read (1) Minutes of Conference on Medical Preparedness J.A.M.A. 115-1201 October 5, 1940; (2) Medical Preparedness in Selective Service, J.A.M.A. 115-1105, September 28, 1940.

State Preparedness Committee Meeting Held September 29

A meetiug of the Oklahoma State Medical Association's Medical Preparedness Committee and the county medical societies' representatives of the committee was held September 29 in Oklahoma City.

More than eighty doctors were present to hear discussed by Dr. Henry H. Turner, Oklahoma Representative of the American Medical Association Preparedness Committee, Maj. Louis H. Ritzhaupt, State Medical Officer, and Col. Don Welch, Director of the Selective Service Board, the part the medical profession will play in the coming mobilizatiou program.

Dr. Turner reported on his trip to Chicago, where he attended a meeting of the State Representatives of the A. M. A. Committee on Medical Preparedness. Present at the Chicago meeting were representatives of the military branches of the Government, and Surgeon General Parran of the United Public Health Service.

Dr. Turner discussed the necessity for every physician and surgeou in Oklahoma to complete the questionnaire mailed to them from the American Medical Association, and further explained the program of the State Association in this respect. It was pointed out that, irrespective of whether or not a doctor is actively practicing medicine at this time, he might have a place in Medical Preparedness and, since the questionnaire did not enlist anyone in the military forces and the information was confidential to the American Medical Association, there was no excuse for anyone not cooperating.

Organization plans were completed for contacting through the county representatives the members of the profession who have not responded to inquiries from the Executive Office of the Association as to whether they have received and mailed the questionnaire, or whether the questionnaire was mislaid or lost.

During the coming weeks, the campaign outlined will be instigated and everyone should cooperate to the fullest extent.

Following Dr. Turner's discussion, Major Ritzhaupt explained the organization and administration of the Selective Service Act as it pertained to the medical profession. Major Ritzhaupt stated that there would be at least one registration board in each county, the total number of boards approximating 106. The following are the present rules and regulations concerning Selective Service Regulations, but are subject to change at any time:

Par. 134. Local boards: Examining Physician.—Each board will have assigned to it one physician appointed by the President, upon recommendation of the Governor. If more than one examining physician are needed, the board shall request the Governor to recommend the necessary additional appointments. All examining physicians shall take the prescribed oath (Form 21), which shall be sent to the Governor for filing. No examining physician shall examine for a board any registrant who is his first cousin, or a closer relation, either by blood or marriage, or who is an employee or employer, or stands in the relation of superior or subordinate in connection with any employment, or is a partner or close business associate, of the physician.

Par. 146. Medical advisory boards.—In each State, medical advisory boards shall be appointed by the Governor to assist local boards in determining the physical qualifications of registrants. The board shall if practicable consist of internists; eye, ear nose, and throat specialists; orthopedists; surgeons; psychiatrists; clinical pathologists; radiographers; and dentists. In event that a medical advisory board cannot be made available to a local board, the Governor shall appoint individual specialists who shall act as a medical advisory board, to assist the local board.

Par. 165. Records: Confidential records.—(a) All reports pertaining to the physical condition of a registrant, and all answers on the questionnaire (Form 40) under the subject "Dependency" (except the names and addresses of claimed dependents), and to the questions on previous military service, shall be confidential and shall not be disclosed without the con-

sent of the registrant, except as provided in subdivision (c) and (d) below. The fact that a claim for deferment has been made on grounds of dependency or physical unfitness, and the classification of the registrant, are not confidential.

(b) Without limiting any other rights he may have, a registrant shall be entitled to know of all entries on his own record, including his questionnaire (Form 40) and record of physical examination (Form 200). He shall be further entitled to know of all statements and allegations which form part of his record.

(c) Confidential records may be examined at any time by the following named officials: the members of the local board, members of the board of appeal, the examining physician, and the government appeal agent, who have to deal with the case; Federal officials and employees duly authorized by the Governor or the Director of Selective Service; and United States attorneys and their duly authorized representatives.

(d) Confidential records shall be produced and published in response to the subpoena or summons of a court, without the consent of the registrant, only in the prosecution of the registrant or of a person in collusion with the registrant, for perjury, or for any violation of the selective service law or directions given pursuant thereto, or in behalf of the Government in suits or claims arising out of the executive acts in the performance of which such records were compiled.

Par. 168. Records: Making entries.—Selective service agencies shall make entries on records with typewriter, black ink, or rubber stamp. RED ink shall be used only as specifically directed.

Par. 171. Oaths: Oath taken by officials (Form 21).—Before beginning their duties, the following persons shall execute Form 21(taking the oath thereon: officials and employees at State Headquarters; members of local boards, boards of appeal, and medical advisory boards; members and associate members of advisory boards for registrants: clerks of all boards; examining physicians: government appeal agents. The completed Form 21 shall be sent to State headquarters for filing. (For oath taken by registrars, see Vol, Two, "Registration.")

All blank forms prescribed in the Selective Service Regulations, together with the instruction printed on such forms, shall be a part of the Regulations.(Par. 163a)

Major Ritzhaupt pointed out in answer to a qnestion as to what authority a doctor would have to make exinations, that he would have Governor Phillips anthorize the medical advisors to make examinations and a copy of the authorization would be provided each connty examiner.

Col. Don Welch was introduced by Major Ritzhaupt and expressed his appreciation as Director of the Selective Service Board for Oklahoma for the fine cooperation given the Board by the medical profession, and outlined the personnel and responsibilities of the Appeal Boards and how they would function. Each Appeal Board, according to Colonel Welch, would be composed of one doctor of medicine, one lawyer, one representative of labor, one representative of industry, and one representative of agrienlture. Colonel Welch closed his remarks by saying, "In behalf of the Governor of this State. I want to thank you for all yon have done and for your offers of cooperation. Yon will be called npon to perform a tremendonsly vital part of this work."

Only Men Fitted For Full Duty To Be Inducted By Army

"It is the present intention of the armed services to accept for induction only those men who are fitted for full duty," Lieut. Col. Charles B. Spruit, M.D., of the Army's general staff, assigned as medical adviser to the Joint Army and Navy Selective Service Committee, Washington, D. C., declares in an article on "Medical Participation in Selective Service," in The Journal of the American Medical Association.

"The physical standards of Selective Service," he continues, "therefore, will be those of the using services, which in the case of the Army are snbstantially those now governing enlistments.

"Many physicians in the Selective Service process will be confronted with a new criterion of jndgment. The doctor in civil life is concerned in treating his patients so that they may continue their present modes of living and physical behavior. The criterion of judgment of Selective Service is that the man shall be capable of performing full military service in any type of organization.

Profession To Cooperate With Medical Coordination Setup

The coordinating committee for medical preparedness recently appointed by President Roosevelt will have the full confidence and cooperation of the medical profession, The Jonrnal of the American Medical Association for September 28 declares in an editorial.

"An executive order," The Journal says, "was issued on September 19 setting up, with the approval of the President, under the Council of National Defense, a snbordinate body to the council to be known as the Medical and Health Committee. The chairman of this organization is Dr. Irvin Abell (Louisville, Ky), who is also chairman of the American Medical Association's Committee on Medical Preparedness. The order defining the establishment of the committee and its duties follows:

"Pursuant to the authority vested in it by Section 2 of the act of Augnst 29, 1916 (39 Stat. 649), the Council of National Defense, with the approval of the President, hereby establishes as a snbordinate body to the connci a committee to be known as the Health and Medical Committee. The committee shall consist of the following members: Dr. Irvin Abell, who shall be chairman, the Snrgeon General of the Army, the Snrgeon General of the Navy, the Surgeon General of the Public Health Service, and the chairman of the Division of Medical Sciences of the National Research Council. Vacancies occurring in the membership of the committee shall be filled by appointment by the council with the approval of the President. The members of the committee and of such subcommittees as may be formed by the committee shall serve as such without compensation but shall be entitled to actual and necessary transportation, subsistence and other expenses incidental to the performance of their duties.

"It will be the responsibility of the committee to advise the Connci of National Defense regarding the health and medical aspect of national defense and to coordinate health and medical activities affecting national defense. In carrying out its functions the committee may (a) ntilize, to the extent that snch facilities are available for such purpose, the laboratories, equipment and services of the Medical Departments of the Army and Navy, of the Pnblic Health Service and of other government institutions and (b) within the limits of the appropriations allocated to it, to contract with and transfer fnnds to snch institutions and to enter into contracts and agreements with individuals or educational or scientific institutions for stndies, experimental investigations and reports.

"The committee shall promnlgate rules and regulations for the conduct of its work, which rules and regulations shall be subject to the approval of the council and the President.

"This executive order brings to a favorable conclusion a canse for which officials of the Association, representing the Board of Trustees and the House of Delegates, have labored persistently since the annnal session (of the Association) in Jnne. The work of the American Medical Association in the development of personnel for the military services for indnstrial medicine and for maintaining the health of the people can be carried forward with far greater efficiency through the establishment of some relationship directly with the government. The work of the National Research Conncil in the investigation of procedures to be carried out for military purposes, in the development of information to be circulated to the medical profession and in the standardization of military medical procednres will also be greatly facilitated by this coordinating committee.

New Treatment of Wounds Suited To Modern Warfare

The closed method of treating compound fractures and infected wounds by the application of plaster of paris casts is particularly suitable under the conditions of modern warfare with its numerous civilian casualties from aerial bombardment, The Journal of the American Medical Association points out in an editorial in a recent issue.

In contrast to the use of chemicals to kill the bacteria, which was employed during the war of 1914-1918, the closed plaster method is based on the principle of rest for the injured part and on the ability of the body to resist bacterial infection. This principle, introduced after the first World War by Baer of Baltimore and H. Winnett Orr, M.D., Lincoln, Neb., was tested by Orr in the use of the closed plaster method in civilian practice. He obtained good results with the method in from 80 to 90 per cent of compound infected fractures.

"The essential feature of the method is the complete immobilization of the soft tissues," the editorial says. "No attempt is made to kill the organisms by external agents. The reliance is placed entirely on the ability of the body to resist bacterial infection.

"The first large scale experiment in the appliance of these principles was made possible in the Spanish war. There chiefly owing to the enthusiasm of J. J. Trueta, chief surgeon of the General Hospital of Catalonia, the method was adopted in the medical service of the republican army. The total number of cases treated was 20,000. The incidence of gas gangrene and of other infections fell so definitely that foreign surgeons who came to Catalonia at the later stages of the war were led to believe that the soil of Spain contained no anaerobes (micro organisms which can live without air).

"The method, as described in Trueta's recent monograph, is carried out in the following manner: Surgical treatment is undertaken as soon after occurrence of the fracture as possible; with the patient anesthetized, thoroughly wash the entire extremity and the wound with soap and water and a nail brush, shave all hair and paint the surrounding skin with a weak solution of iodine; excise the skin edges of the wound, remove all contused (bruised) tissue and widen the wound; excise carefully and unhesitatingly all nonviable (not capable of living) muscular and cellular tissues; open up the neighboring cellular surfaces affected by contusion, always keeping in mind the need for adequate drainage; remove all foreign material; reduce (restore to normal) the fracture by traction on an orthopedic table; dress the wound with sterile gauze and immediately immobilize with plaster including the two adjoining joints if possible. The plaster is applied according to the method of Bohler directly to the skin, only the bony prominences being padded; administer 3,000 units of tetanus antitoxin. It is not permissible to cut a window in the cast, since this deprives the soft tissues of much needed immobilization. 'It can be observed,' says Trueta, 'that the tissues swell into the gap in the plaster and their healing power is correspondingly weakened.' This is in essence Orr's treatment with a single exception, namely that Trueta employs dry gauze as dressing for the wound instead of Orr's petrolatum pack. The plaster is left in position as long as the smell is not excessive and the plaster has not become soft and wet. It may be left in position for from four to six weeks and then replaced and left in position until such time as the fracture has healed.

"In Trueta's own material there were 1,073 cases of compound fractures of the limbs, most of them war wounds. There were six fatalities, 976 good or satisfactory results and ninety-one poor results. Trueta expresses the belief that no other treatment could have enabled them to alleviate for so many victims the horrors of war and air raids. Dr. Rudolph Matas, who had an opportunity to observe the method in the Catalonian war zones, writes: 'I had an opportunity to see several plaster encasements removed from arms and thighs after they had been in situ (position) for from fifteen to twenty-one days. The stench of the soiled encasement was nauseating. A magma or mush of decomposing pus and wound secretions covered the surface of the wound under the plaster bandage. But after washing this off with warm water and soap, and when the packs were removed, I was surprised to see the excellent, healthy, pink, well granulated appearance of the wound coupled with a very satisfactory condition of the patients—no fever, no pain, good appetite. This was indeed a revelation I did not anticipate.' Matas quotes Dr. Jimeno of Banolas, under whose direction there were treated 6,000 fractures, of which 500 were fractures of the femur, with a mortality for the total group of 3.2 per cent. There was only one case of gas gangreue and this one had appeared before admission to the hospital.

"The rationale of treatment is based on the following considerations: 1. Rest allows local veins and capillary (minute blood vessel) thrombi (blood clots) to form. These prevent and delay the spread of infection and are not broken down by repeated handling. 2. Rest allows new capillaries to form which are not torn down by repeated dressing of the wound. 3. The plaster maintains a constant beneficial pressure on the wound; the calcium in it may be of local value much as the calcium gluconate exuded by the maggots according to Stewart. 4. The mixture of organisms on the wound may by their mutual antagonism prevent the victory of any one group. 5. To leave a deep wound uncovered produces dehydration (loss of water) and loss of heat leading to a condition of shock. The success of the method depends in a large measure on a thorough understanding of the underlying principles and rigid adherence to a meticulous technic. 'It is fallacious to believe,' warns Trueta, 'that it suffices to enclose a wounded limb in a plaster of paris cast to achieve the benefits of closed treatment.'

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New Color Blindness Tests Are Compiled By Authorities

Thanks to the foresight of U. S. military authorities, new color blindness tests have been compiled by them, thereby making this country independent of Germany and Japan, principal sonrces of previous color perception tests, it has been announced by the American Optical Company.

The new tests, approved for use in the armed forces of the United States by the Surgeon-General, will replace as a national standard in this country the Ishihara test, printed in Japan, and the Stilling system, of Germany, both of which are practically impossible to obtain due to the war.

The new compilation, which will be distributed by the optical concern, incorporates the best of the Ishihara and Stilling tests and adds features leading to the detection of those persons who do not wish to pass a color blindness test and also those attempting to hide their color blindness.

The introduction of these new American color tests, comprising 46 printed diagrams and handbook of instructions, it was stated, is particularly timely during the present period of expansion of army, navy, air, rail and highway transportation personnel.

Color blindness, it has been estimated, occurs in from 3 to 4 per cent of men, while only about 0.3 per cent of women are afflicted. The disproportion is accounted for by the fact that the defect is in many cases inherited, remaining latent in the female and becoming manifest in the male offspring. It occurs both as a congenital defect and as an acquired affliction.

For safety on the highway, it was recommended that color blindness tests be made an integral part of a driver's examination. At the present time nine states require no license to drive, twenty require no visual test, and only one—New York—has a color perception test, recently passed by the New York Legislature. School children should also be tested for color perception because early training may re-educate the color sense in the early stages of a child's development. It was also pointed out that a child's studies should be planned according to his visual ability as color blindness would obviously bar him from certain vocations.

In explaining the new color blinduess tests, it was stated that the 46 diagrams or charts are composed of patterns (figures, letters, etc.) made np of variously shaded dots of the primary colors set on a differently colored background of similar dots in confusion colors. While the figures are easily seen by a normal person, the color-blind individual, unable to differentiate colors, cannot distinguish the figures from the background. In mild forms of color blindness, hesitancy in naming the figures reveals the weakness.

The 46 plates provide for the detection of each type of color blindness, the particular type and degree being determined by noting the plates missed or read with hesitation. As the mere naming of the figures or letters suffices, color ignorance does not interfere with the test, while for testing a completely illiterate or speechless person all he has to do is trace the outline of the designs seen.

Fellowship In Electron Microscope Research

The National Research Council recently announced a new fellowship in electron microscope research established by the RCA Manufacturing Compnay for work to be carried on in the company's laboratories at Camden, N. J.

It was announced that preference would be given "to versatile yonng men of United States citizenship, who have sound training in microbiology, a doctor's degree (Ph. D. or M.D.) and a record of original work." Applications are to be sent to the division of biology and agriculture, National Research Council, Washington, D. C.

Obstetrics, Gynecology Exams Set For January, 1941

The written examination and review of case histories (Part I) for Group B candidates for the American Board of Obstetrics and Gynecology will be held in the various cities of the United States and Canada on Saturday, January 4, 1941, at 2:00 p.m. Formal notice of the place of examination will be sent each candidate several weeks in advance of the examination date. No candidate will be admitted to examination whose examination fee has not been paid at the Secretary's Office. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination held in June, 1941.

Candidates for re-examination in Part I (written paper and submission of case histories) must request such re-examination by writing the Secretary's Office not later than November 15, 1940. Candidates who are required to take re-examination must do so before the expiration of three years from the date of their original examination.

The general oral and pathological examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board, meeting at Cleveland, Ohio, in June, 1941, immediately prior to the annual meeting of the American Medical Association.

Application for admission to Group A, Part II examinations must be on file in the Secretary's Office not later than March 15, 1941.

After January 1, 1942, there will be only one classification of candidates, and all will be required to take the Part I and Part II examinations.

For further information and application blauks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

A. M. A. WILL RESUME NETWORK RADIO BROADCASTS NOVEMBER 13

"The winter and spring season of network radio broadcasting will be resumed by the American Medical Association in cooperation with the National Broadcasting Company over the Blue network of stations beginning Wednesday, November 13, at 10:30 to 11 p. m. eastern standard time (9:30-10 central, 8:30-9 mountain and 7:30-8 Pacific)," The Journal of the Association for September 21 announces.

"The program will be in dramatized form constituting the sixth successive season of dramatized broadcasting by the Association on a nationwide network. The title of the program will be Doctors at Work. The theme of the program will be the interpretation to the listener of services available in the treatment of disease and the preservation and promotion of health through the various branches of modern medicine. Thirty programs are planned dealing with different phases of medical practice, beginning with medical education, internship, residency and general practice and embracing all the major specialties in medicine and in medical phases of public health work.

"The scripts will be written by William J. Murphy, director of continnity for the central division of the National Broadcasting Company, and will be under the supervision of the Bnreau of Health Education with the cooperation of Miss Jndith Waller, educational director, central division, National Broadcasting Company.

"The evening hour assigned for these broadcasts is the most favorable hour that has ever been made available for sustaining health education broadcasts. Poster announcements of the programs have been prepared by the Bnrean of Health Education. These will be sent in any reasonable quantity which can be effectively used on request from state or local medical societies and units of the Women's Auxiliary or to health departments, schools or other educational institutions."

Comments on the program from physicians and other listeners are invited.

Another High Blood Pressure Cause Cited

Evidence that high blood pressure is the result of obstruction of the arteries of a kidney is presented in a recent issue of The Journal of the American Medical Association by Nelson W. Barker, M.D., and Waltman Walters, M.D., Rochester, Minn., who cite five cases in which the blood pressure returned to normal after the affected kidney was removed.

The pressure has remained normal for some months in four of the patients; in the fifth case sufficient time has not elapsed since operation to make a definite statement, the authors say.

In further support of their contention Drs. Barker and Walters state: "In twenty six, or 45.6 per cent, of a series of fifty-seven cases in which a diagnosis of chronic atrophic inflammation of a kidney was made by x-ray study there was an elevation of blood pressure. In twenty-four cases in which chronic atrophic inflammation of a kidney was diagnosed after its surgical removal fifteen, or 62.5 per cent, showed an elevated blood pressure and eleven, or 45.8 per cent, definite hypertension."

Grants For Cancer Research Awarded

Grants for research on cancer were awarded by the National Advisory Cancer Council at a June meeting at the National Cancer Institute in Bethesda, Maryland.

The grants were: Washington University School of Medicine, St. Louis, $16,000; Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York, $3,300; Barnard Free Skin and Cancer Hospital, St. Louis, $5,000; University of California Medical School, San Francisco, $5,000, and American College of Surgeons, Chicago, $5,900.

"When Bobby Goes To School" May Be Shown To Public By Any Licensed Physician

Under the rules laid down by the American Academy of Pediatrics, their new educational-to-the-public film, "When Bobby Goes to School," may be exhibited to the public by any licensed physician in the United States.

All that is required is that he obtain the endorsement by any officer of his county medical society. Endorsement blanks for this purpose may be obtained on application to the distributor, Mead Johnson & Company, Evansville, Indiana.

Such endorsement, however, is not required for showings by licensed physicians to medical groups for the purpose of familiarizing them with the message of the film.

"When Bobby Goes to School" is a 16-mm. film, free from advertising, dealing with the health appraisal of the school child, and may be borrowed without charge or obligation on application to the distributor, Mead Johnson & Company, Evansville, Indiana.

Surgeons Form New Association

During the recent annual meeting of the American Surgical Association in St. Louis, formation was effected of a new organization designed for the closer association of younger surgeons of the Middle West and the adjacent Canadian provinces, and to be known as the Central Surgical Association.

Officers elected were: Dr. Roy D. McClure, Detroit, President; Dr. Grover C. Penberthy, Detroit, President-Elect; and Dr. George M. Curtis, Columbus, Ohio, secretary.

The first regular meeting will be held in February, 1941, at the University Hospital, Ann Arbor, Mich.

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SURGERY AND GYNECOLOGY

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"Correlation of Friedman Test and Phase of Endometrium in Ectopic Pregnancy." By Myron E. Goldblatt, M.D., F.A.C.S., and Harold A. Schwartz, A.B., M.D., New York, N. Y.; American Journal of Obstetrics and Gynecology, August 1940, Volume 40, No. 2, Page 233.

This is a careful review of thirty-two cases of ectopic pregnancy in which the complete clinical and laboratory findings are analyzed with particular regard to the findings of curettage, the result of the Friedmau test, the microscopic examination of the removed tube, and the clinical picture.

The authors poiut out the fact that the diagnosis of a recently ruptured ectopic gestatiou with profuse intra-abdominal hemorrhage is usually not difficult, but that the uuruptured extrauterine preguancy and the one with slight or recurrent internal bleediug is frequently a serious and difficult diagnostic problem. Iu situatious of this sort careful history, physical examination, and routine laboratory procedures are sometimes not sufficient aud it is uecessary to resort to uteriue curettage, cul-de-sac aspiration, posterior colpotomy, and occasionally even to an exploratory laparotomy. It is with this difficulty in mind that the authors have attempted to correlate the various phases of findings in these thirty-two patieuts with ectopic pregnancy.

They entirely agree with Siddall and Jarvis in that patieuts with ectopic pregnancy who have not bled vaginally for more than ten days usually have uterine decidua left iu the uterus. These authors also state that iu their patients those who have bled scautly, even for mauy weeks, may still have uteriue decidua present and that there is a decreased decidual expectancy as the duration of the bleediug increases. They also feel that the amouut of vaginal bleeding has much to do with the abseuce or preseuce of decidua in the uterus. The greater amount of blood loss, the greater the chance of the decidua being absent.

In their series no patient with a negative Friedman test had uterine decidua at the time of curettage. Likewise no patient with uteriue decidua had a negative Friedman test.

They believe that there is a close relationship between the result of the Friedman test and the preservation of chorionic villi.

They point out that occasionally one finds a morphologically perfect placental tissue iu the Fallopian tube, a positive Friedman test and an abseuce of decidua in the uterus. Iu these patients there is usually a history of prolonged and profuse bleediug from the vagina, decreasing the possibility of decidua remaining in the uterus.

In a well-regulated hospital, a suspected case of ectopic preguancy without acute symptoms they feel may be observed with comparative safety until an accurate diaguosis is made.

They support the aspiration of the cul-de-sac in an attempt to confirm a diagnosis in cases of old suspected ectopic pregnancy where the Friedmau test is negative.

Comment: In certain cases of ectopic preguancy where there is only slight or recurrent intra-abdominal hemorrhage, an accurate diagnosis is extremely difficult and it requires the most careful investigation and a thorough knowledge of the condition, together with a proper interpretation of the findings.

It is quite true that au accurate history is probably of the greatest importance in any instance of ruptured ectopic pregnancy. However, such studies as this one are frequently of assistauce in conclusively confirming a diagnosis. The work of Siddall and Jarvis, now confirmed by these authors, gives importance to the findings on curettage, certainly within the first ten days of vaginal bleeding. The present work adds an important correlation between the findings of currettage and the results of the Friedman test. It must be remembered that the Friedman test is positive in only about two-thirds of the instances of ruptured ectopic pregnancy.

An ill-advised unnecessary exploratory abdominal operation is to be condemned when every effort has not been made, by the proper iuterpretation of the findings, to arrive at an accurate diagnosis. It is such studies as this one which allow for more accuracy in preoperative diagnosis.

Wendell Long.

"Subarachnoid Injection of Alcohol for the Treatment of Pain In Genital Carcinoma." By Frank L. Bauer, M.D., Iowa City, Iowa; American Journal of Obstetrics and Gynecology, August 1940, Volume 40, No. 2, Page 278.

This is a report of the results in twenty-two patients who were treated by subarachnoid injection of alcohol for the relief of pain in advanced genital carcinoma.

Nine received no or poor relief. Five obtained indifferent relief persisting longer than seven days. The remaining eight obtained good relief which lasted well beyond a week.

They found injections frequently followed by serious permanent motor and sphincter disturbances. They feel that there is an apparent correlation between the degree of relief obtained and the amount of such resulting motor and sphincter disturbance. Eight of the twenty-two had motor paralysis, six had sphincter disturbances, and five had combined motor and sphincter disturbances, all of which lasted for more than three days. "Five of the eight with motor paralysis and three of the five with sphiucter disturbances fell into the group of eight patients who obtained good relief. In contrast, the group of nine who obtained no or indifferent transient relief included only oue patieut with combined motor and sphincter disturbances and one who suffered urinary incontinence."

Comment: The principal means of obtaining relief from intractable severe pain associated with iucurable carcinoma of the genitals are increasing doses of opiate, chordotomy, subarachnoid injections of alcohol, and cobra venom.

The use of subcutaneous injections of cobra venom has relieved the pain in these patients in an appreciable percentage. Since no serious deleterious effects have been observed from its use, we feel that cobra venom therapy should be tried as the initial treatment in the relief of such intractable pain.

However, there are certain instances in which cobra venom therapy is not effective and sometimes the chance of relief from pain in these very discouraging situations outweighs the possibility of the untoward effects of alcohol injections and the rather major procedure of chordotomy.

It must be emphasized that these patients deserve opiates sufficient for relief of their pain in the event

that one of the procedures outlined above is not effective or is not undertaken.

It must also be stated that the untoward effects of motor paralysis and sphincter disturbances have a much higher incident in this report than in most, despite the fact that these authors were using from ½ to 1½ c.c. of alcohol per injection. It is probable that a smaller amount of alcohol properly administered would materially reduce the untoward results but there is likewise some question as to whether or not they would have as great an effect upon the relief of pain.

Wendell Long.

"A Case of Lymphosarcoma Developing Over a Period of Twenty Years. (Un Cas De Lymphosarcome Evoluant Depuis Vingt Ans)." By J. E. Gendreau and G. Pinsonneault; L'Union Medicale du Canada, Volume 69, Number 7, July, 1940, page 702.

The first sentence in this article directs attention to the important clinical fact that lymphosarcoma is more poorly understood than any of the cancers (Le lymphosarcome est le plus mal connu des cancers). This is attributed to the uncertainties that still surround the origin, the identity and the future histogenesis of the normal lymphocyte. It is said that this mosographical entity was created by Virchow about 100 years ago, and that it is more or less concerned in the origin of all neoplastic formations in connection with the lymphatic ganglia. It is a large group composed of such clinical entities as lymphatic leucemia, malignant lymphogranulomatosis, lymphosarcomatosis, leucosarcomatosis, etc. All of these are characterized at first by the peculiar histological behavior of the lymphocyte. From time to time a new and hitherto unrecognizable branch detaches itself from the ancient trunk of the lymphosarcomas. It appears that in this way clinicians and investigators frequently and repeatedly direct attention to what seem to be hitherto unknown clinical or histological entities. These divisions and subdivisions appear to continue without ceasing (Le demembrement se continue sans cesse), and each is regarded as a new branch that detaches itself from the ancient trunk of lymphosarcomas. One of the latest is reticulosarcoma, described in 1925 by Goormaghtigh, designed to indicate tumors formed at the expense of the web of reticular tissue.

In spite of all these successive divisions, they are characterized by the presence and abnormal behavior of the lymphocyte, and in that connection the authors remark that the ancient group of lymphosarcomas, in spite of successive divisions, have family characteristics.

It is always very difficult and sometimes impossible to judge of the malignancy of these tumors by histologic examination alone. Most often the development is rapid, and metastases early and numerous. The metastases appear almost constantly in other lymphatic tissue or in the bones. It frequently happens that with all the information obtainable, including autopsy, one is not able to identify a metastasis from a primitive lesion.

The general condition of the patient alters rapidly. Frequently there is fever—in fact the presence of fever is the rule, particularly in an advanced phase of the disease. Frequently it presents more evidences of a systemic malady than of the neoplasm.

Another characteristic of lymphosarcomas is their apparent radiosensibility. The tumors the most radiosensible are the lymphosarcomas. When a neoplasm disappears with extraordinary quickness after radiation, the diagnosis of a lymphoid tumor is strongly supported by that circumstance. However, the authors indicate that it would not be wise to have that statement applied to all lymphosarcomas; in other words, one encounters relatively often lymphatic tumors of feeble radiosensibility, or at least of only mediocre sensibility (en d'autres termes, on peut tomber relativement souvent sur des tumeurs lymphatiques, de radiosensibilite faible ou pour le moins mediocre).

The following case report is made because, with the exception of radiosensibility of a characteristic type, the patient did not present any of the ordinary symptoms or signs of lymphosarcoma:

Case Report: A man 56 years of age entered the Institute of Radium on October 11, 1938, for multiple tumors of the face and of the pharynx.

The father of the patient had died at the age of 80 years of senility. The mother was living at the age of 83, and was in average health. A brother had died at the age of 32 of pulmonary tuberculosis. A sister had died at the age of 66 of osseous tuberculosis. Some other brothers and sisters had died of typhoid fever and diphtheria.

The patient had had typhoid fever at the age of 18 years. In 1936 he had articular rheumatism for a period of about two months. In 1918, at the age of 36 years, he had had a furunculosis of the neck. Following this attack, two small tumors appeared on the neck. One of them was about the size of a nut.

In 1934 there was a small tumefaction of the left lower eyelid. He was seen by a surgeon who removed it and sent it for histo-pathologic examination. The histo-pathological report was "rediculo-sarcoma, undifferentiated." It appears that, at the same time, there was an opinion that the tissue showed evidences of an old lymphosarcoma. It appears that all the eyelids were successively involved at the time that the patient was admitted to the Institute of Radium, but there was no evidence of recurrence of the small mass removed from the left lower eyelid.

By the end of 1935 there were small tumors of the eyelids near the commissure on each side. These were removed surgically by the surgeon then attending the patient. There was a recnrrence at one point.

In November, 1936, there was a tumefaction of the left tonsil. It was thought to be an abscess and was incised by his physician.

In the winter of 1936, two new tumors began to develop at symmetrical points in the postero-superior portion of each cheek.

In 1937 there was tumefaction of the right upper eyelid.

In 1938 some small masses appeared just above the supratrochlear region in each arm, and a small mass appeared in the right iliac fossa of the abdomen.

On admission to the Institute of Radium, October, 1938, there were important functional difficulties, as follows: The vision was greatly reduced due to obstruction of the palpebral fissures by the tumors. There was deafness of both ears to the extent that the patient was not able to follow a conversation in the ordinary tone of voice. There was anosmia and dysphagia. He had lost a good deal of weight, and complained that he had recently become much weaker.

Physical examination showed that the tumors disseminated upon the surface of the body apparently presented the same characteristics. They were rather soft masses, rounded in form and did not, from the physical examination, leave the impression that they were encapsulated. It appeared that they were situated in the subcutaneous cellular tissue, and that they were slightly adherent to the deeper structures. The skin over the tumors could be folded, and did not appear to be distinctly modified. Pain, spontaneous or provoked, was absent. The soft palate was reddish in color. At the same time the mucons membrane covering the palatal structures was edematous, and presented some of the physical characteristics of orange peel. The tonsils were enlarged, and their encroachment upon the pharynx reduced the diameter of the isthmus of the pharynx about one-half. The mediastinum was clear. The temperature was normal. The urine negative. The blood Wassermann negative. The blood count showed HGB. 85 per cent, R.B.C. 4,650,000, W.B.C. 9,360, polynuclears 57 per cent, lymphocytes 34 per cent, large mononuclears 6 per cent, eosinophiles 3 per cent.

Two tumors were removed for histological examination: The one first noticed in 1918 and the more recent one noticed in 1938. The histological examination confirmed the findings made several years before, apparently by the Laboratory of Anatomy and Pathology,

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PHYSICIANS

of the Laval University of Quebec—that is, undifferentiated reticulo-sarcoma—Old lymphosarcoma.

The treatment was Roentgenotherapy, described by the authors in a technical and definite way, but will not be repeated here. The results were quickly and marvelously satisfactory. All the various masses disappeared, and at the same time there was disappearance of the important functional difficulties noted in the report. The patient had been admitted in October, 1938. He was discharged in February, 1939, apparently cured. He has been observed since his discharge. There has been no evidence of recurrence.

In connection with this article there are two pictures of the face. The first one at the height of the difficulty when the face is swollen, the eyes closed, and much evidence of distortion. The last one, following treatment, is the picture of a face that appears to be quite normal.

LeRoy Long, Sr.

"Surgical Treatment of Varicose Veins (Le Traitement Chirurgical Des Veines Variqueuses)." By L. A. Bourbeau, Chirurgien a l'hopital Youville (Noranda): L'Union Medicale, Volume 69, Number 6—June 1940, Page 620.

It is remarked that the surgical treatment of varicose veins is not new, and in that connection there is a reference to the advice of Everard Home who, in 1811, noted the good effects due to the inclusion of the internal saphenous vein in a ligature above the knee in chronic ulcers associated with a varicose state.

The present conception of the pathology and the treatment of varicose veins dates from the latter part of the last century when Trendelenburg explained that the principal cause of varicosities was the iusufficiency of the valves of the internal sapheuous. He devised a test for it, aud it is still known as the Trendelenburg test. This was about 1891.

About 1927 Sicard, of France, devised the treatment of varicose veins by the injection into them of sclerosing agents. It is interesting to know that Pravaz created the hypodermic syringe to meet the requirements of that mode of treatmeut. It is also interesting to know that, in France, the hypodermic syringe is still usually designated as the "seringue de Pravaz."

The treatment of varicose veins by the injection of sclerosing agents in order to obliterate the veins by the formation of thrombi was popularized around 1927 by Sicard, of France. He revised a method that was attempted about 90 years ago for the obliteration of vessels in connection with aneurysm.

Sicard injected into the veins such substances as 50 per cent alcohol, solutions of perchloride of iron, mixtures of suspensions of tannic acid with solutions of iodine, et cetera.

Many patients were relieved, and for a time surgical operation for varicose veins was practically discontinued. It was not long, however, until it was realized that there were many cases of infection, embolism, and the additional realization that when the patient escaped these dangerous accidents there were many cases where the varicose veins were obliterated only temporarily, and that later on there was canalization of the thrombi. Around 1930 these difficulties quickly led to a discontinuation of the injection of sclerosing agents as a general treatment for varicose veins. It was found that many patients did not receive any benefit at all even when the injections had been done well. In the case of some patients there was a failure of the contemplated thrombosis following the injections. Sometimes there was canalization of the thrombus with a recurrence of the original difficulty. The author remarks: "Si nous avons eu quelques succes, ne tenant pas compte des complicatious frequentes, dans la majorite des cas nous n'avons pas eu l'impression que ce traitement, par les injections sclerosantes, etait le meilleur." Translated into English, this means, "If we have had some success, not taking into account the frequent complications, in the majority of the cases we have not had the impression that this treatment, by the injection of sclerosing agents, was the best."

The present tendency of the majority of surgeons is to combine the two techniques: Ligatures and injections. In connection with this combined treatment one must have in mind, particularly, the necessity of correcting the insufficiency of the valves of the internal saphenous. It has been estimated that when the valves are insufficieut, there is a reflux of blood from above downward, when the patient is standing, equal to about 200 centimeters of water. In such a case the ligature is of importance because it reduces the pressure in a vein with effective valves and protects the thrombus against recanalization ("La ligature, d'autre part, reduit la pression dans une veine avec des valvules insuffisantes, et protege le thrombus forme contre la recanalisation").

There is a reference to what is known as the Trendelenburg test. With the patient in a recumbent position, the leg is elevated until the varicosities collapse. Now strong pressure by the hand is applied, or, still better, a tourniquet is applied at the upper part of the thigh so that the pressure blocks the circulation in the internal saphenous. Then the haud or the tourniquet is removed and the patient is permitted to stand up. If the veins below the point of pressure fill rapidly and completely, the test is said to be positive. If the pressure is maintained by hand or tourniquet, and if, at the same time, there is rapid filling of the veins below the point of pressure it must be concluded that the rapid filling of the veins below the point of pressure is due to insufficiency of the communicating veins. In such a situatiou the Trendelenburg test is said to be doubly positive, "and ligation of the internal saphenous at its termination only is inadequate and useless." A second ligature is then necessary at a much lower level for the purpose of interrupting the retrograde circulation by way of the communicating veins.

Ligature of the internal saphenous ought to be done in high position where it joins the femoral vein, and at the same time the collateral veins should be ligated.

The injection into the veins distal to the point of ligation of sclerosing agents should be begun either at the time of operation or soon after it.

It appears to be appropriate to treat certain patients by the injections of sclerosing agents without ligation. The author lists them as follows: 1. Those with small varices and limited to the lower part of the leg and calf, and without a positive Trendelenburg test. 2. Those who refuse operation, even when ligation of the internal saphenous is indicated.

"For the method of ligatures and injections combined one ought to choose all the cases where the varicosities are of a medium or great intensity, and which do not present contraindications to active treatment. The principal among these are: Advanced age, pregnancy, a preceding phlebitis.

The author lists the following conditions as commanding very particularly an operatiou:

(1) Insufficiency of the internal saphenous.
(2) Veins with thin walls easliy broken.
(3) Veins already ruptured.
(4) Chronic eczema.
(5) Chronic venus varicosities.
(6) For esthetic reasons, the localized varicose veins not being due to a deep obstruction.
(7) Painful veins.

One ought not to operate upon patients who suffer from infectious phlebitis, unless the operation is done to remove the inflamed vein or for the treatment of a thrombosis.

This splendid contribution is followed by a short, but useful bibliography, the articles of which are made up mostly of American authors, the priucipal exceptions being P. Lecene of Paris and Leriche of Strasbourg.

LeRoy Long, Sr.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
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"Keratosis Pharyngis." George Swinburne, Melbourne. The Journal of Laryngology and Otology, May, 1940.

Keratosis Pharyngis is defined as an affection of the epithelium associated with lymphoid tissue found in that area known as Waldeyer's ring, which includes the pharyngeal tonsil, the faucil tonsil, the lingual tonsil, the so-called lateral pharyngeal bands, and any outlying or lesser collection of lymphoid tissue in the naso-oro-, or hypopharynx.

A historical survey is given of the subject. This condition was first mentioned in a Berlin Medical Society meeting in 1873. It is not very commou, but is not noticed many times because of the fact that it is painless. Thomson states that the affection occurs between the age of 15 and 40 years.

It was once thought that this was more common in professional voice users but this theory has been abandoued. Keratosis Pharyngis is now considered to be a metaplasia. It occurs most commonly on the faucial tonsils and the base of the tongue—it usually occurs in several regions at the same time. Microscopically it is shown that the horny projections have their base in a mass of lymphoid tissne. The stratified squamous epithelium is hypertrophied at the point of contact. Some of the masses may be formed by projection from a crypt but otherwise they arise directly from the surface epithelium.

The horny projections are usually discovered during a routine examination or accidentally by the patient himself. Local symptoms are: tickling, pricking, sensation of dryuess, sensation of the presence of a foreign body, or the production of coughing or hawking, or the desire to swallow frequently, or even a vocal fatigue possibly secondary to the hawking and coughing.

The condition develops slowly usually, but after an irritation or an acute throat infection, it may develop rapidly. It rarely recurs.

In appearance it resembles an acute follicular tonsillitis except that there is an absence of local inflammation and you have the presence of the horny projections. Diphtheria and true mycosis pharyngis leptothricia must be ruled out in the diagnosis.

Local treatment has little effect aud it may even prolong the condition. If the outgrowths are confined to the tonsil and are a source of annoyance to the patient, a tonsillectomy should be done. Any other focus of infection in the mouth, pharynx or nasal sinuses should be eliminated. Numerous photomicrographs are included in the report as well as a bibliography.

"Retinal Changes With Marked Impairment of Vision In Measles." F. R. Shlossberg, M.D. and Morris Prizer, M D., Haverhill, Massachusetts. American Journal of Ophthalmology, September, 1940.

This case of almost complete blindness following a mild attack of measles is reported because of its rarity. Berens, Kirby and McKay reported a study of 2,702 cases of blindness and found that only .9 per cent were due to measles. 3,836 cases at the South Department, Boston City Hospital, over a period of twenty years, show no cases of blindness followiug measles.

This is a case report of a little girl, aged six, who entered the hospital five days after a mild rash appeared on her body diagnosed correctly as measles. . . . The day before coming to the hospital the child complained of failing vision and on entering the hospital her vision was nil. The blood picture was negative except for a slight increase in lymphocytes. Urine, x-ray of sinuses, lumbar puncture, etc. were essentially negative. Temperature, pulse and respiration were normal. The pupils were widely dilated. There were round hemorrhages throughout the fundus. Light perception aud projection were absent. The disc gradually became less hyperemic day by day. The pupils slowly contracted down to normal size. Reaction to light gradually returned. The hemorrhages slowly were absorbed. By the 27th day she had a vision in both eyes which enabled her to detect hand movements. The discs showed a secondary atrophy. Six months later vision in the right eye was 4/200 and iu the left 3/200. Different diagnoses by outstanding ophthalmologists were: 1. Acute neuroretinitis. 2. Venous thrombosis with secondary changes due to altered blood supply. 3. Neurochorioretinitis. 4. Embolism of the central retinal artery.

"Management of Recurrent Trachoma Following Sulfanilamide Therapy." William Legrande, Los Angeles. Archives of Ophthalmology, September, 1940.

According to the author Lian appropriately sums up the situation by saying: "Although sulfanilamide alone will not cure trachoma, it is a valuable aid in combination with the mechanical methods." A series of 34 cases are reported in which there have been 62 per cent recurrences within six to thirty months. Of the twenty one who had recurrences, sixteen were treated with iontophoresis, a 1:200 to 1:100 dilution of quiuine bisulfate being used. Previous experiments had shown that the use of zinc solutions had resulted in excessive tissue reactions. The majority of this group has been followed over two years and none have had another recurrence. The method of treatment is to use some local anaesthetic such as butyn or phenacine hydrochloride twice at two miuute intervals in the lower cul-de-sac of the eye to be treated. Each ounce of the quinine bisulfate solntion used should contain a drop of glycerin. The application of the electrodes is very important. During the treatment the medicated electrode should be in contact with the entire coujunctiva, including the fornices, lids, inner and outer canthi and carnucle. The indifferent electrode is placed firmly on the upper portion of the back of the neck, reaching the tip of the mastoid bone. It is placed on the opposite side to the eye treated.

The positive electrode is kept moistened with the quinine solution by means of a pipet. The duration of the treatment is from two to four minutes. Two to three millamperes per square centimeter of positive electrode are used. The treatments are given on the average of once a week for ten weeks. There should be a complete regression of the follicles by the end of the sixth treatment. The author regards the combination of sulfanilamide and ioutophoresis as the complete treatment for trachoma. These cannot be given concurrently because of the tissue reaction encountered. About five days should elapse between the treatments if the tissue reaction is to be avoided. The author claims the tissue response is better during the ionization if the patient takes Vitamin A in the form of plain or emulsified cod liver oil, one ounce twice daily. Conjunctival instillations of the vitamin are not recommended.

"Present Status of Short Wave Diathermy in the Treatment of Nasal Sinusitis." A. R. Hollender, M.D., Miami Beach, Florida. The Eye, Ear, Nose and Throat Monthly, September, 1940.

This is a favorite subject with the author. In this article he recapitulates and emphasizes some pertinent points. His summary is as follows:

1. The scientific utilization of short wave diathermy for nasal sinusitis presupposes careful selection of cases.
2. From the standpoint of clinical effect, when short wave diathermy is indicated in nasal sinusitis, there seems little or no difference whether air-spaced electrodes, rubber condenser electrodes, or the electromagnetic field with cable is used, so long as correct technic is followed.
3. It is reiterated on the basis of more extensive studies that short wave diathermy is of value as an aid to indicated procedures solely in acute sinusitis.

4. Allergic sinusitis and hyperplastic sinusitis are contraindications to local heat in any form.

5. Observations on the value of short wave diathermy as a postoperative aid have been disappointing, demonstrating more conclusively the futility of applying this agent in chronic sinusitis.

6. While the empiric use of heat in any form is irrational in chronic sinusitis, short wave diathermy because of its deep heating qualities is sound therapy in acute exacerbations of this condition for relief of pain and improvement of drainage.

7. It is probable that short wave diathermy fails in chronic sinusitis because of fixed tissue changes which do not yield to most local non-surgical procedures.

PLASTIC SURGERY

Edited by George H. Kimball, M. D., F. A. C. S.
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"Rhinoplasty: Argentine Method." Dr. Oscar Ivanissevich and Dr. Roberto C. Ferrari, Buenos Aires, Argentina. Surgery, Gynecology and Obstetrics. August, 1940, Page 187.

The Argentine method was first described by Dr. Oscar Ivanissevich in 1921. This method employs the pinna of the ear with its skin and cartilage to repair loss of tissue in the soft parts of the nose, nasal tip and the nasal alae. The pinna is transplanted by means of the thumb. Since 1921 the author states that he and his collaborators have used this method 46 times.

The author states that tissue from the ear was chosen because of its similarity to the tissues of the soft part of the nose. Its cartilaginous structure gives elasticity and toughness to the graft. The graft is so constructed that the skin of the mastoid area is used to cover the apex and the alae. The skin of the outside part of the ear is used to form the nasal vestibule. The convex end of the helix, therefore faces downward and outward.

The technique used in the transplantation resembles that of the Italian method and is carried out in two stages. In the first stage the pinna is sutured to the fleshy part of the thumb. This has to be done very carefully and in two planes. In the deep plane the periosteum of the third phalanx is fastened with thin catgut to the cartilage of the ear. In the superficial plane the skin edges of the ear are carefully sutured with silk to the skin of the finger.

Ten days later the skin sutures are removed and the circulation from the ear to the finger is intermittently interrupted, by means of continuous pressure tongs. For the first few days pressure is exerted for only five minutes and then gradually the interruption period is increased until pressure is applied for an hour by the twentieth day. If the digito-auricular flap is large and cicatrization is normal, this period will be sufficient. When the graft does not change color upon interruption of the auricular circulation of blood, that is, when the circulation in the graft has been established, then the propitious moment to sever the section from the ear has arrived.

In the second stage the pinna is divided at the level of the line upon which the continuous pressure tongs has been placed, and the finger with the piece of pinna attached is thus isolated. It is now possible, depending upon the circumstances, the age and tolerance of the patient, to proceed with the operation. The free end of the pinna flap may be sutured and cicatrization waited for, or the second stage may be done immediately; that is, the piece of ear attached to the finger may be fixed to the nose. The surgeon must decide what is best in the particular case.

Suture of the auricular flap to the nose after the stump is freshened is very easy and yet requires special care. The suturing must be done in three planes: in the cutaneous plane of vestibule, the cartilaginous plane, and in an external cutaneous plane. The last suture is intradermic.

From the tenth day on, interruption of circulation with the tongs is carried out. Usually it is possible to separate the finger from the graft after 20 days.

After the finger is freed, the surgeon may decide to join the free end of the graft to the nasal stump immediately or he may suture the free end and wait until cicatrization is complete. The decision depends upon the nutritional condition of the graft. Occasionally during this process as well as during the earlier stage of the operation, the skin of the graft may become edematous and brittle. In such cases it is best to act with caution and before proceeding with the next stage, to wait beyond the 20 day period mentioned for both stages or until epidermization of the graft is complete.

The third stage consists in the final adaptation of the graft. No special description of technique is needed. The prime essential is great care in the suture which is best done in three layers.

The subseptum can be made from the skin of the inferior face of the auricular graft. On this skin a cutaneous trapezoidal flap of the inferior base is carved as shown by the author in drawings and photographs. The skin is dissected up to the cartilage and the ends are sutured to the remaining piece of the nasal septum.

Comment: The method outlined for rebuilding of the nasal tip is highly technical but carried with it a very fine final result. From the description of the operation and from the photographs and drawings shown, I believe this method is as good as any we have used before. For certain cases this technique should be kept in mind.

CARDIOLOGY

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"Standardization of Blood Pressure Readings." Joint Recommendations of the American Heart Association and the Cardiac Society of Great Britain and Ireland.—Published by the American Heart Association.**

(Note: The following article is published by the American Heart Association. It has had rather limited circulation, and due to the interest of the general practitioner in this subject, I feel that it is well worthwhile repeating here).

INTRODUCTION

It has long been realized by thoughtful teachers and practitioners of medicine that the wide variations noted in blood pressure records of the same individual were due not only to changes in the pressure from time to time under different conditions, but also to differences in the methods and interpretations used by the observers. A recent survey* revealed a serious lack of agreement among physicians as to the correct technique for measuring the blood pressure and interpreting the results obtained. Equally confusing was the situation among insurance companies as to what they should require of their examiners in this regard. Experiments with multiaural stethoscopes demonstrated that recent years have brought little, if any, improvement in this situation, since the disagreement among the recently qualified was as great as that among attending physicians, and the range of error was too large among all groups tested. The Committees for the standardization of methods of making blood pressure readings appointed by the American Heart Association and by the Cardiac Society of Great Britain and Ireland have attempted to secure

*Wright, I. S., Schneider, R. F., and Ungerleider, H.: Factors of Error in Blood Pressure Readings. Am. Heart Jour. 16: 469, 1938.

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a crystallization of the best available thought on this subject.

The joint committees were asked, if feasible, to make recommendations which might be accepted as constituting standards for practicing physicians, medical teachers, insurance carriers, and all others interested in this problem. After a careful study of material available from many sources, the Committees of the American Heart Association and of the Cardiac Society of Great Britain and Ireland jointly recommend the following procedure as the standard method for taking and recording blood pressure readings in man.

STANDARDIZATION OF BLOOD PRESSURE DETERMINATIONS

(Recommendations of the Committees for the Standardization of Blood Pressure Determinations)

1. *Blood Pressure Equipment.*—The blood pressure equipment to be used, whether mercurial or aneroid, should be in good condition and calibrated at yearly intervals—more often if defects are suspected. (Mercurial preferred—British Committee).

2. *The Patient.*—The patient should be comfortably seated (or lying—British Committee), with the arms slightly flexed and the whole forearm supported at heart level on a smooth surface. If readings are taken in any other position, a notation of that fact should be made. The patient should be allowed time to recover from any recent exercise or excitement. There should be no constriction of the arm by clothes, etc.

3. *Position and Method of Application of the Cuff.*—A standard-sized cuff containing a rubber bag 12 to 13 cm. in width should be used. A completely deflated cuff should be applied snugly and evenly around the arm with the lower edge about 1 inch above the antecubital space and with the rubber bag applied over the inner aspect of the arm. The cuff should be of such a type and applied in such a manner that inflation causes neither bulging nor displacement.

4. *Significance of Palpatory and Auscultatory Levels.*—In all cases palpation should be used as a check on auscultatory readings. The pressure in the cuff should be quickly increased in steps of 10 mm. Hg until the radial pulse disappears, and then allowed to fall rapidly. If the radial pulse returns at a higher level than that at which the first sound is heard, the palpatory reading should be accepted as the systolic pressure; otherwise the auscultatory reading should be accepted.

5. *Position and Method of Application of Stethoscope.*—The stethoscope should be placed over the previously palpated brachial artery in the antecubital space, not in contact with the cuff. No opening should exist between the lip of the stethoscope and the skin; this should be accomplished with the minimum pressure possible. The hand may be pronated or supinated, depending on which position yields the clearest brachial pulse sounds.

6. *Determination of the Systolic Pressure.*—The cuff should be rapidly inflated to a pressure about 30 mm. above the level at which the radial pulse can be palpated. The cuff should then be deflated at a rate of 2 to 3 mm. Hg per second. The level at which the first sound regularly appears should be considered the systolic pressure, unless, as pointed out above, the palpatory level is higher, in which event the palpatory level should be accepted. This should be noted.

7. *Determination of the Diastolic Pressure and the Pulse Pressure.*—With continued deflation of the cuff, the point at which the sounds suddenly become dull and muffled should be known as the diastolic pressure. If there is a difference between that point and the level at which the sounds completely disappear, the American Committee recommends that the latter reading should be regarded also as the diastolic pressure. This should then be recorded in the following form: RT (right arm) or LT (Left arm) 140/80-70, or 140/70-0. If these two levels are identical the blood pressure should

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be recorded as follows: 140/70-70. The cuff should be completely deflated before any further determinations are made.

The British Committee believes that except in aortic regurgitation it is nearly always possible to decide the point at which the change comes, and that this is the only reading which should be recorded.

EXPLANATORY COMMENTS

In addition to the above specific recommendations, the Committees believe that certain other factors should be taken into consideration by the physicians who make blood pressure determinations.

The relative merits of various types of sphygmomanometers have been the subject of numerous reports. In the opinion of the joint Committees, mercurial and aneroid types of apparatus are capable of correct readings if they are in good condition, and both types of equipment may produce inaccurate findings if not in good condition. This factor is often overlooked in the case of the mercury manometer, which should be checked at intervals as to the following points:

1. The level of the mercury at rest should be exactly at the zero mark. If some of the mercury has leaked out this will not be the case. The missing mercury should bo replaced.
2. If the small air vent at the top of the glass tubing becomes clogged, a definite lag may be produced; the mercury column may not register the pressure in the bag, and the readings will therefore be incorrect.
3. The apparatus must be on a level surface, since tilting of the manometer will result in incorrect readings. It should also be level with the observer's eyes.

A yearly calibration of the aneroid type of instrument against a U-tube standard is recommended. This is particularly advisable for the older instruments, in which a sharp blow or fall may cause inaccuracies due to resultant changes in the aneroid diaphragm. The needle should stand at zero when the apparatus is completely deflated and move immediately when the inflation begins. Manometers which have a stop pin at zero, or those which have a rotatable dial, permitting the user to set the zero mark anywhere, are not recommended, since a satisfactory check with instruments of this type is impossible.

In both types of equipment the valves of the instrument, including those of the rubber bulb, should be competent and function smoothly. The entire system, including the "pressure" rubber tubing and rubber bag, must be free from leakage and must be kept in good condition. It is recommended that the instrument to be used be checked at yearly intervals against a machine known to be in perfect condition. More frequent checks should be made if the accuracy of the instrument is in doubt. The rubber cuffs should be 12 to 13 cm. wide and 23 cm. long. The cloth covering should be of inextensible material of such a nature that even pressure is exerted throughout the width of the cuff; it should extend as a band 15 cm. wide for 60 cm. beyond the edge of the rubber cuff, and then taper gradually for an additional 30 cm. New types of cuff, using a "zipper" mechanism or hooks on a rib extending the width of the cuff, appeared to be more satisfactory than the long, tapering cuff end. If bulging occurs above and below the band the reading may not be accurate.

A special cuff should be used to measure blood pressure in the leg. The rubber bag should be 15 cm. wide, and its covering 17 cm. wide and 30 cm. longer than in the case of the armlet (total 120 cm.). For children, cuffs of the following widths have been suggested: under eight years, less than 9 cm.; under four years, less than 6 cm.; newborn babies, less than 2½ cm. The limited work done in this field does not warrant a definite recommendation at this time.

The American Committee selected the sitting position as the preferable one because of the fact that it simplifies the taking of large numbers of blood pressure readings. It is true that many patients are bedridden, but in most instances they may be propped up into a sitting position without causing more than transitory disturbances in the circulation; and when this is impossible it is suggested that a notation be made as to the position in which the blood pressure is taken. The British Committee did not think that there was any significant difference between the sitting and lying positions. For blood pressure readings in the thighs, the stethoscope bell should be placed over the popliteal artery with the patient prone.

Certain physical and psychologic factors should be considered. Inquiry should be made as to the patient's activity just before the examination. Exercise and meals affect the blood pressure. A rest period of from 10 to 15 minutes prior to the making of the observations will eliminate or minimize certain of these factors. It is important that the physician evaluate the degree of stress or emotional crises through which the patient may be passing. The first reading taken by a physician is often much higher than later ones, due to apprehension and nervousness on the part of the patient. It is often wise, therefore, to avoid conclusions regarding the blood pressure level of an individual until several readings have been made on successive visits. This is especially important with hypertensive and hyperthyroid patients. Any evidence of apprehension or of undue concern on the part of the physician may alarm the patient and increase the pressure.

There are variations in the blood pressure level of certain individuals in the course of a day. It is therefore suggested that for careful records the time of the day should be noted, and if the patient is being carefully followed with reference to the blood pressure level the observations should be made at essentially the same time and in the same relationship to meals, sleep, exercise, and other similar factors.

The term "points" is suggested for use in reference to diastolic pressure, since the word "phase," formerly used, implies a measure of time interval, whereas in reality the fourth and fifth "points" are the exact levels at which change is made from one phase to the next. Detailed discussion of the second and third phases is not pertinent to this report, since those phases are of little, if any, practical importance and tend to confuse the issue at hand. It should be clearly recognized that a single figure for systolic or diastolic pressure apparently does not represent actual pressure within from 5 to 10 mm. of mercury. If the physician wishes to minimize the sources of error several blood pressure readings should be made, the highest and lowest being recorded. Although an average of the series of readings might be recorded, this would not have the same significance in instances of cardiac irregularity.

The determination of blood pressure in arrhythmias is unsatisfactory, at best, when made with the apparatus under discussion. With premature beats the higher systolic pressure of the beats that terminate compensatory pauses should be ignored. With auricular fibrillation both diastolic and systolic readings should be recorded as approximate only. It is suggested that in this condition the average of a series of readings for the appearance of the first sound be noted as the systolic pressure, and that similar averages for the fourth and fifth "points" be recorded as the diastolic pressure. The diagnosis, if not stated elsewhere on the patient's chart, should be noted with the blood pressure recording. In aortic regurgitation with a collapsing pulse the diastolic end point is sometimes marked by a less obvious change in the quality of the sounds than normally. This change may be difficult to appreciate.

Alternation of the pulse during blood pressure determinations may indicate left ventricular weakness.

It is suggested that, when especially careful studies of the blood pressure are to be made, the use of basal blood pressure conditions should be considered. A preparation similar to that used prior to measuring the basal metabolic rate is recommended. Such a basal blood pressure determination should be made 10 to 12 hours after a meal (preferably in the morning), after the patient has rested for 30 minutes in a comfortably warm

room. The patient should be mentally, as well as physically, at ease. This procedure would be most useful in experimental studies in which an accurate standard level is desired. Objections to its use in general practice are obvious.

When auscultatory methods alone are used, the actual blood pressure level may be definitely higher than the level at which the first sounds are detected. Under these circumstances, the palpatory reading will be the more nearly correct of the two. If both palpatory and auscultatory methods are used, as recommended, this error will be detected.

In occasional instances, the usual sounds are heard over the brachial artery at a fairly high level; as the pressure in the cuff is reduced, the sounds completely disappear, only to reappear at a distinctly lower level. This zone of silence is known as the auscultatory gap. Its existence is obviously important, inasmuch as it is possible in such patients to inflate the cuff only to the level of the auscultatory gap, and to record the systolic pressure at the level where sounds are first heard, which may actually be 40 or 50 mm. below the true systolic level.

The importance of avoiding unnecessary venous congestion should be recognized. This can be minimized by making certain that there are no constricting bands on the patient's arm, and that the pressure cuff is not kept inflated longer than absolutely necessary to make the blood pressure reading. Decompression should be at the rate of approximately 2 to 3 mm. Hg per second. After making a reading, the cuff pressure should be reduced to zero long enough to allow the veins to empty before another determination is started.

It is suggested that on the first examination of the patient the blood pressure be taken in both arms, since the two may not be the same. If the patient is followed for a period of time this procedure might wisely be repeated at stated intervals of every few months, and at other times if indicated by developments. In the presence of unexplained high pressure in the brachial arteries it is suggested that the blood pressure in the legs be taken also. By this procedure conditions such as coarctation of the aorta may be detected.

If the variations in blood pressure which occur with respiration are considerable, this factor may be eliminated by taking a reading while the patient holds his breath at midrespiration, but this must be for only a short interval, or abnormal blood pressure readings, due to asphyxia and other factors, will result.

Certain factors inherent in the physician, such as variations in accuracy of hearing, must be recognized as important. A physician who is aware that his hearing has become impaired should use a stethoscope in which sound is amplified to a considerable extent, and in the event of marked deafness electrically amplified or other mechanical devices should be utilized. It is thought inadvisable at this time to make recommendations regarding automatically recording blood pressure equipment.

The combined use of the auscultatory and palpatory methods, as described herein, will yield routine data that are as reliable as those given by any other method. Under exceptional circumstances, as when the pulse is too feeble to produce sounds or too irregular for averaging, recording methods may become necessary. Those contemplating the use of graphic methods should first ascertain through reliable sources whether they will subserve the ends in mind.

The recommendation of a standard procedure, as outlined by the Committees, is not intended to discourage initiative when indicated in special situations.

INTERNAL MEDICINE

Edited by Hugh Jeter, M. D., F. A. C. P., A. S. C. P.
1200 North Walker, Oklahoma City

"Clinical Blood Cultures. An Analysis of Over 5,000 Cases." By Herbert Fox and James Stuart Forrester, from the William Pepper Laboratory of Clinical Medicine, Hospital of the University of Pennsylvania, Philadelphia, Pa., American Journal of Clinical Pathology, Volume 10, Number 7, July 1940.

This is a valuable report which nicely summarizes the results of a large series of blood cultures as follows.

The records of 5310 blood cultures in the general services of the Hospital of the University of Pennsylvania show that 20.6 per cent of the attempts revealed pathogenic bacteria. These cultures were made upon 3423 patients of whom 32+ per cent were found bacteremic. The essentials of the technique, media and precautions are given. All varieties of the pathogenic bacteria were found to appear in the first four days of laboratory cultivation, but in some instances these same kinds of bacteria required much longer incubation before visible growth occurred, some for ten days, a few for fourteen days. This condition we ascribe to the paucity of germs in the blood and the antibacterial power of this substance. No bacteria grew after fourteen days, but our experience indicates that all inoculated media should be observed for this time unless sooner positive. Simple media have yielded a high percentage of positive results. Anaerobic organisms have grown in deep glucose broth with calf brain added. Contaminants have been of little significance. Skin cocci and diptheroids appear to have had no detrimental effect on the development and growth rate of pathogens. Mean daily temperature of the patient in the absence of rigors appears to have little or no relationship to the isolation of bacteria from the blood stream. Chill seems to be preceded by bacteremia.

"The Pathogenesis Of Banti's Disease." By William P. Thompson, M.D., New York City. Annals of Internal Medicine, Volume 14, Number 2, August 1940.

The author gives a nice brief history of Banti's Disease and reports interesting findings in connection with a comparatively large series of cases such as fall into this class, 137 cases in this general type. Direct or indirect evidence of portal vein hypertension is considered to exist in all of such cases and the splenomegaly, the collateral circulation, and the esophageal varices result therefrom.

No clinical or hematological differences can be found between patients with congestive splenomegaly due to intra- or extrahepatic obstructions, except in cases of advanced liver disease when the clinical features of hepatic insufficiency will appear and assume preponderance.

The gross and histological pathology is considered to

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be in all cases that of congestive splenomegaly and the syndrome is considered to result from a mechanical congestive state. This state may be the result of a variety of causes. No reason for assuming the presence of an unknown toxic agent was found.

The term congestive splenomegaly is suggested to replace Banti's Disease of splenic anemia.

"Spleen Size In Pernicious Anemia." By Edward Bigg, M.D., Chicago, Illinois. Annals of Internal Medicine, Volume 14, Number 2, August, 1940.

In this the author gives the answer to the question which is often asked: Should we expect to find splenomegaly in pernicious anemia? His conclusions are as follows:

1. In a series of 200 consecutive cases of pernicious anemia the spleen could be palpated in 3 per cent.

2. The red blood cells in these six individuals were presumably spherical.

3. One patient was proved at autopsy to have cirrhosis of the liver.

4. In 18 cases which came to autopsy, there was some degree of enlargement of the spleen in 94.6 per cent. In only one of these cases was the spleen palpable.

UROLOGY

Edited by D. W. Branham, M. D.
502 Medical Arts Building, Oklahoma City

"An Experimental Study Of The Anesthetic And Analgesic Properties Of Peridium." John H. Morrissey and Anthony N. Spinelli. Journal of Urology, September, 1940.

In an attempt to evaluate the analgesic action of pyridium in those instances of urinary tract infection presenting the chief symptom of dysuria, the drug was administered to 103 cases. A definite reduction in distressful symptoms was produced by the drug.

In another series of operative cases where pyridium was administered prior to and following operation, wound analgesia was produced to a degree where the need for narcotics was minimal.

Most of the cases reported required no postoperative narcotic medication whatever.

In a series of cases in which pyridium was used for surface anesthesia in cystoscopy, for cystoscopic diagnostic procedures, and for urethral medication, adequate and satisfactory results were obtained.

Initial studies of the detergent action of pyridium are reported and indicate that a more complete iuvestigation along these lines might be of clinical value.

Comments: Pyridium has a useful but limited field in the treatment of urinary tract infection. I seriously question its slight analgesic value, as observed in this investigation, will widen its use particularly where we have at our disposal much more efficient and convenient preparations for this purpose.

It is difficult to see in the urinary concentration in which pyridium is excreted, how it can exert much analgesic effect on the bladder and urethral mucosa. Certainly its bacterio-static effectiveness in the control of infection has proven much inferior to the other more common drugs used in treatment.

"Treatment Of Gonorrhea With Sulfathiazole." Ormand S. Culp. Journal of Urology, September 1940.

The drug sulfathiazole was used in thirty-eight cases of gonococcal urethritis at the Brady Urological Institute. In only twenty-one cases were there adequate follow-ups to determine its clinical effectiveness. Seventeen patients obtained cures; i. e., no recurrence noted after the drug was discontinued. Two frank failures and one recurrence was noted.

The authors admitted the group was too small to draw sweeping deductions, but they felt that great value was present in sulfathiazole in the treatment of gonorrhea.

Comment: It is such articles as this that confuse the profession in their evaluation of new drugs for treatment. Twenty-one cases of gonorrhea are hardly a beginning in order to determine whether a new drug is effective in treatment.

I can remember enthusiastic writers rushing into print a few years ago with but a few cases treated with sulfanilamide when the drug was introduced. During that period it was not unusual to see 80 per cent or even 100 per cent cures reported, but observe how time has leveled these estimates; we know now that 20 per cent is possibly a high figure for good results.

Such an article as this is of little scientific value and even actually misleading as it encourages the profession to draw erroneous conclusions as to the actual worth of a new drug.

New Material for Glass Coverslips

A new material, plastacele, has proved satisfactory as a substitute for the small glass coverslips used for microscopic laboratory work, the supply of which has been threatened by the European war, Jack C. Norris, M.D., Atlanta, Ga., reports in The Journal of the American Medical Association.

Glass coverslips have been imported from Germany, England and Japan. Since the beginning of the war, their price has increased from $1.50 to $3.75 an ounce, making their use almost prohibitive to the average hospital laboratory. The new plastacele coverslips, which are perfectly transparent, are slightly less expensive than the imported ones were at prewar prices.

Bureau of Animal Industry Divisions Merged

The biochemical division of the Bureau of Animal Industry of the U. S. Department of Agriculture has been merged with the pathologic division and the animal nutrition division. The position of chief of the biochemical division has not been filled since the recent death of Robert M. Chapin. Activities of the division relating to animal diseases were transferred to the pathologic division and those relating to the nutritive value of animal products were assigned to the animal nutrition division at the Beltsville Research Center, Beltsville, Md.

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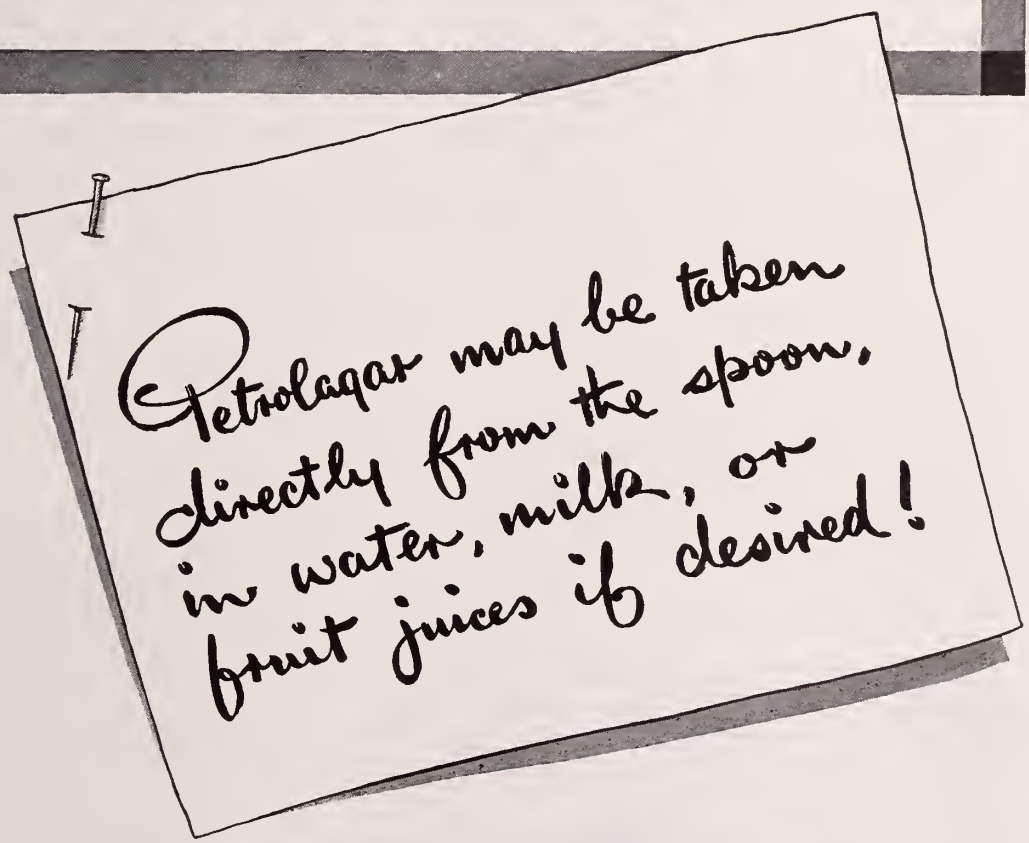
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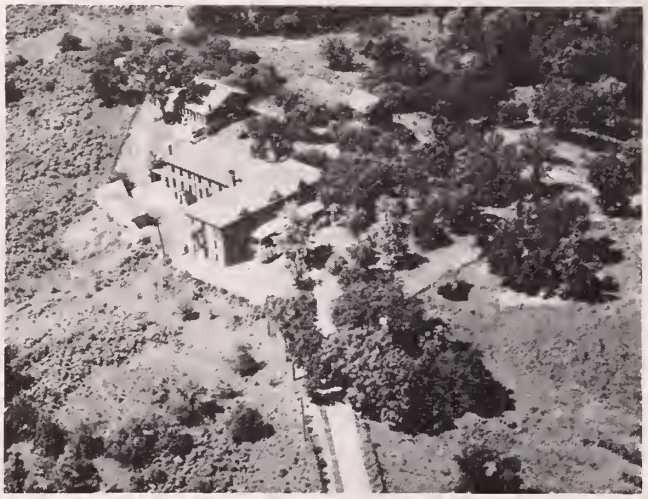
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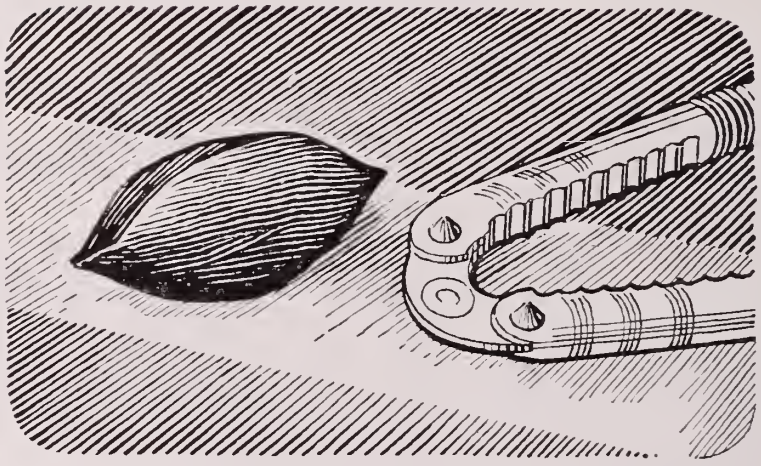
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VOLUME XXXIII OKLAHOMA CITY, OKLAHOMA, NOVEMBER, 1940 NUMBER 11

Hypertension*

CLIFFORD A. TRAVERSE, M.D.
ALVA, OKLAHOMA

Probably in no other chronic disease is early recognition of more importance than in high blood pressure. It is one of the most common ailments of modern civilization, being directly responsible for the death of many people whose lives might have been prolonged had their hypertension been recognized earlier and appropriate treatment instituted. It is estimated that approximately 140,000 people die yearly in the United States from hypertension and the cardiorenal complications. The heart, blood vessels, and kidneys are so closely related in the body that disease of any one is usually followed by disease of the others.

Essential hypertension is characterized by an abnormally high blood pressure, which under excitement and physical strain frequently rises suddenly to high peaks. It develops most in the third and fourth decades of life, but it also may develop in the first, second, and fifth decades. Its progress may be slow, moderate, or rapid, terminating life at 10 to 15 years after onset, if its progress is slow; at 3 or 4 years if moderate; and at 18 months if rapid.

Essential hypertension is probably due to a fault in the neurogenic-endocrine and vascular mechanisms. There are at present four theories regarding the cause of essential hypertension.

1. Hyperirritability of the sympathetic vasomotor system in which nervous strain or nervous tension is expressed as a generalized increase in arteriolar tonus. Nicotine is known to be a sympathetic stimulant.

2. Excessive secretion of one of the endocrine glands, either pituitary, suprarenal or thyroid. Kepler reports some cases of pituitary basophilism and cases of suprarenal cortical tumor in which hypertension was present. Large doses of the hormone from these tumors does not affect the blood pressure of normal subjects. So except for some few isolated cases, evidence is lacking for this theory.

3. Infection theory, or exogenous toxin. This also is described in a few isolated cases. This theory is supported by hypertension in toxemia of pregnancy, since the hypertension disappears following emptying of the uterus.

4. Obstruction to the renal circulation. This theory is perhaps supported by the majority of investigators. The present trend by many is to divide the etiology into renal and non-renal. Hypertension resulting from nephritic disease suggests that there has developed a pressor substance which causes the arterial musculature to remain more or less in spasm. The continuous muscle spasm, ischemia of the arterial wall plus the additional burden of the hypertension soon results in injury to the arterial musculature with permanent narrowing of the arterial lumen. The experimental work of Goldblatt, Blaylock, and others has shown that hypertension could be produced in animals by partial occlusion of renal arteries by use of metal clamps and that the hypertension was not prevented by previous or subsequent sympathectomy. So strictures of a ureter, stones, hypertrophied prostates, etc., can produce hypertension. One can chemically diagnose a stone in one ureter with resulting hydronephrosis associated with hyperten-

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sion, and removal of that kidney cures the hypertension.

Pyelonephritis is a well known cause of hypertension, claimed by some to be responsible for 30 per cent of the cases. Presence of pus cells, albumen, and especially organisms, suggests pyelonephritis. A good plan in this case is to get a pyelogram. If ureter strictures are found and dilated, it will usually relieve the hypertension. Sulphanilamide is the drug of choice in pyelonephritis.

As far back as 1898 two men (Tigerstedt and Bergman) demonstrated that a saline extract from fresh cortex of the kidney of normal rabbits contained a pressor substance which they called "renin." Similar extracts of the spleen, intestine, muscle, brain, suprarenal glands, and blood of normal rabbits were inactive. The site of action of renin appears to be in the peripheral arterioles and to be independent of the nervous system. This assumption, together with the results of studies of blood flow in cases of essential hypertension, suggests the possibility that arteriolar constriction in essential hypertension might be due to a renin-like substance in the circulating blood.

Arterio-sclerosis may be explained much better in the future and more be done for it than ever before. A Doctor in Chicago has isolated a "Lipocaiac" hormone from the pancreas which is claimed to have the same effect on fat metabolism that insulin has on carbohydrate metabolism. Experimentally produced arterio-sclerosis in rabbits has been reduced by giving this hormone. Diabetics who develop the marked arterio-sclerotic changes with gangrene, may be due to a lack of this hormone.

There is a general tendency, I believe, to pay too much attention to the blood pressure and too little attention to the vascular system. While at the Mayo clinic recently, I had an opportunity to have the work of Keith personally reviewed with me on retinal lesions associated with hypertension. In the work of Keith and Wagoner, they state that elevation of the systemic and retinal blood pressure is usually associated with structural changes in the retina or its vessels which can be recognized by ordinary ophthalmoscopic methods. The retinitis, retinal hemorrhages and edema, when present, presented definite evidence concerning the status and prognosis of the disease. They have classified hypertension into four Group one suggests an early stage and group four the advanced stage.

Number I.

1. Normal vessels — Caliber of artery average.
 Caliber of vein average.
 Reflex stripe on artery moderate.
 Lumen of artery regular.
 Compression of vein at arterial cross ing—none.
2. Diffuse arterial disease, Hypertension Group I.
 Caliber of artery uniformly constricted.
 Caliber of vein normal or constricted.
 Reflex stripe on artery uniformly exaggerated.
 Lumen of artery regular.
 Compression of vein at arterial crossing moderate.
3. Diffuse arterial disease—Hypertension Group II.
 Caliber of artery uniformly constricted.
 Caliber of vein relatively dilated.
 Reflex stripe on artery uniformly exaggerated.
 Lumen of artery irregular.
 Compression of vein at arterial crossing moderate, oblique, angled.
4. Retinitis of Hypertension Group III.
 Arteriosclerosis of hypertension type.
 Disc, no edema, sometimes hyperemia.
 Edema of retina, none or mild.
 Exudates, cotton-wool, scattered.
 Exudates, absorbing edema, in latter states at times.
 Hemorrhages, scattered.
5. Retinitis of Diffuse arterial disease, Hypertension Group IV.
 Moderate in degree, second stage.
 Arteriosclerosis of hypertensive type.
 Disc, relatively marked edema and often in manela.
 Exudates, cotton wool, rather numerous.
 Exudates, absorbing edema, relatively scanty, usually late.
 Macular star, delicate, usually incomplete.
 Hemorrhages rather numerous.
6. Retinitis of chronic Glomeculonephritis.
 Arteriosclerosis, none in early stage, post-inflammatory type later.
 Disc, edema and anemia.
 Edema of retina, massive, extensive, often subretinal, also at times with detachment of retina.
 Exudates, cotton-wool, relatively few.
 Exudates, absorbing edema, rather numerous.
 Macular star, dense, often complete.
 Hemorrhages, relatively few.

SUMMARY

So from this work, Keith and Wagoner's classification divides diffuse arterial disease with hypertension into four groups:

1. Those with little or no sclerosis of the retinal arteries and without retinitis.
2. Those with definite sclerosis of the retinal arteries, but without retinitis.
3. Those with definite sclerosis of the retinal arteries with retinitis (hemorrhages and exudates) but without edema of the optic disk.
4. Those with definite sclerosis of the retinal arteries with retinitis and edema of the disk.

In groups 1 and 2 the prognosis is favorable, in group 3 it is serious; and in group 4, 94 per cent of Keith's patients were dead three years after the diagnosis was made.

TREATMENT

In evaluating the results of treatment in hypertension it is necessary to emphasize the fact that the blood pressure in these cases may undergo spontaneous fluctuations. These may occur within a few minutes. Thus, in considering the status of a patient's blood pressure, it is advisable to obtain many blood pressure readings under varying conditions of activity and rest. The cold pressor test (Hines) has been valuable in estimating maximal blood pressure and the administration of large doses of barbiturates, together with rest in bed, has been valuable in minimal blood pressures in cases of hypertension. There is no question but that the blood pressure of a hypertensive individual is increased by nervous strain or anxiety. The mere fact that he gains confidence in his physician, that he comes many times to the physician's office, and becomes accustomed to the use of the sphygmomanometer may be responsible for lowered blood pressure readings regardless of the type of treatments which he may be receiving.

Medical treatment of essential hypertension in group 1 is satisfactory. Group 4 does not respond to medical treatment, but the patient must be cared for. Groups 1 and 2 include early or late benign hypertension; groups 3 and 4 include early or late malignant hypertension. Some patients who have hypertension group 2 or 3 respond rather well to medical treatment and others do not. It has long been recognized that rest and the reduction of nervous stresses and strains are important in the treatment of hypertensive patients. The treatment should begin with a period of several days' rest in bed, during which the blood pressure is determined several times a day. The charted results of these determinations frequently show a decrease in the blood pressure and convince the patient of the value of rest. One should not speak of curing their hypertension, but speak more advantageously of reducing the blood pressure, or of controlling the hypertension. While rest is important, we must avoid apprehension and semi-invalidism by too strict a regime. They should have nine to ten hours of sleep each night, should lie down for an hour at midday, and have a quiet peaceful environment during the week-end. The environmnet should be arranged to eliminate stresses and strains. If the patient is obese, his weight should be reduced; if he is not obese a general diet may be employed. The restriction of salt and protein is not now considered to be effective in the treatment of uncomplicated essential hypertension.

Essential hypertension is far from uniform in its course, and this fact makes it difficult to appraise the value of any given therapeutic agent. There is no evidence at the present time that hormones obtained from the ovaries are of any value. Were there available a nontoxic adequate vasodilator, the problem of treatment of many patients would be solved rather satisfactorily. Unfortunately, no such drug is available. Many drugs have been used, and while some may reduce the blood pressure for transient periods, the majority are impracticable for use over a long period. Very often the patient who is free from symptoms sleeps well. That fact suggests the use of sedatives when rest and sleep are not easily attained. Chloral hydrate has a good record for helping hypertensive patients recover their former ability to sleep. Bromides and the barbiturates are used most extensively. The barbiturates are preferred because there is less danger of toxic effects. Phenobarbital is one of the best in the group for long continued administration. Vasodilators, such as the nitrites and acetylcholine, have only a transient depressor effect. The nitrites and nitrates will produce a definite fall in blood pressure, but their effects are transient, and it is difficult to give sufficient doses frequently enough, over long periods, to produce any definite therapeutic effect. Theobromine (theophylline and phenobarbital) are helpful, used in one-half grain doses tid. But if the sedative was removed, I doubt that there would be any demonstratable results. Their effectiveness for continued administration is questionable. Cyanates — The general feeling at the Mayo Clinic was that the danger signs from this drug are over-estimated. They have been using it extensively for two years and like it. They use Sodium Thio-cyanate, Lilly, a three-grain enteric coated tablet. Start with three grains tid for one week, then reduce to three grains Bid. Both sodium and potassium Sulfocyanate have been used extensively during recent years. It is used in one-fourth to one-

half grain doses tid in a suitable elixir and may be combined with a sedative. Toxic manifestations, as fatigue, weakness, mental confusion, disorientation and rarely nausea are often encountered at first, but they usually wear away in two to six weeks' time. These patients are reported to be relieved a great deal symptomatically, and there is often a great improvement of his cardiac and renal efficiency. The cyanate content of the blood should not be permitted to rise above 20 milligrams per 100 c.c. because of possible vascular collapse and thrombosis. Nitro-glycerine, and amyl nitrite, are very temporary, and may be used only for acute symptoms. Purgatives are condemned, use only mild laxatives—milk of magnesia, equal parts of Cas-Evac and mineral oil, etc.

Surgical Procedures: Various types of surgical operations on the sympathetic system, particularly splanchnic resection, have been found to lower blood pressure, at least for certain periods. But, as in the case of medical therapy, surgery has obtained its best results in the milder or more chronic cases. It has not been demonstrated as yet that surgical intervention can essentially alter the course and prognosis in cases of hypertensive disease of the more progressive or malignant type. If there is no response to rest, vasodilators, and cyanates, and they are not a group four, then surgery would probably be indicated. It has been found that, following surgery, some patients respond better to medical treatment.

DISCUSSION

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Hypertension

I shall not discuss the endocrinological, neurological, or technical laboratory aspects of this subject. The average general practitioner will probably have given these up as hopeless for him anyway.

In the Student Health Service of the University of Oklahoma, we see a rather surprising number of cases of hypertension with what I believe is evidence of early cardiovascular-renal damage. In addition to the hypertension, often of a minor degree, the following syndrome is rather characteristic: There is a history of acute infectious disease such as scarlet fever, diphtheria, smallpox, rheumatism, or of chronic infections such as apical abscess, pyorrhoea, infected tonsils, or chronic suppurating middle ear. The temperature may be slightly above normal; the pulse above normal, increasing more than normally after exercise and failing to return to normal after two minutes of rest. There may be only a tract of albumin in the urine, which may have disappeared within a few days. With this picture, it is a mistake to assume that therefore it is of no significance. Repeated checks will often show a recurrence of albuminuria and a persistence of the other findings mentioned. In my opinion, the picture points definitely to early cardiovascular-renal damage.

This is no case for conservatism in the management of focal infections. The patient should be under observation; he should be instructed to cultivate regular habits with sufficient rest, to avoid excesses and infectious diseases, and to take extraordinary care in case of colds or other infectious conditions. In this way, it should be possible to prevent many cases of serious damage later. This is the corn bread and turnip greens aspect of this subject, but the one most understandable to the general practitioner and most important in his hands.

Pellagra*

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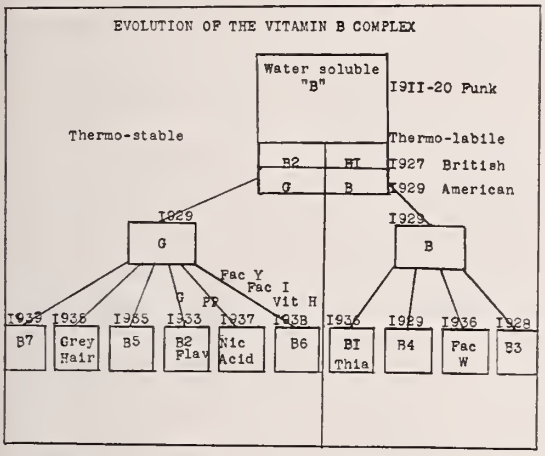
Recent developments in the isolation and synthesization of the components of the Vitamin B Complex has developed a conception of pellagra unique in the history of medicine. Animal and human experimentation has thrown great light on the multiplicity of pellagrous symptomatology, etiology and treatment.

The obstacles which were thrown in the path of a clear conception as to the etiology of pellagra, were necessarily present, because of a lack of a defined plan of systematic procedure, and a deficiency of a scheme of

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classification and terminology. A history, therefore, of the evolution of the terminology now used in the Vitamin B Complex is appropriate at this time, to give the clinician a clear cut picture of the terms which will be used in the following discussion.

Funk (1) in 1912 called the deficient substances in foods, "Vitamines."



McCollum (2) in 1916 proposed that vitamines be called "Water soluble B" and "Fat Soluble A" etc.

Drummond (3) in 1920 suggested omitting the "e" from the word vitamine, dropping the terms "water soluble" and "fat soluble" and simply calling these vitamins "A, B. C." etc.

In 1927 the British Accessary Food Factor Committee (4) proposed B1, B2, B3, B4, B5 as a solution to the terminology, which was rapidly developing from the isolation of the components of the old B Complex.

In 1929 the American Society of Biological Chemistry (5) recommended that "Vitamin B" be used to designate the heat labile or anti-berri fraction and "Vitamin G" be used to designate the heat stable portion.

Vitamin "G" terminology (6) was later used to designate the pellagra preventing factor. Recently, however, it has more generally been used interchangeably with Flavine or B2.

Vitamin H, Factor Y, and Factor I were probably the same vitamins as B6 or the Rat antidermatitic vitamine.

The PP Factor of Goldberger (7) was without a doubt Nicotinic Acid.

As you can see from the above chart, the B complex of 1911-20 has now been divided into ten portions, namely, B1, B2, B3, B4, B5, B6, B7, Nicotinic Acid, Fac. W and the Anti Grey Hair factor. Still more components are probably present.

At the present time there are three and possibly four of these ten that we are interested in from the treatment standpoint, in dealing with the human family. They are B1, the anti neuritic vitamin, B2, the flavin or anti chilitic vitamin, nicotinic acid, antipellagrous vitamin and possibly B6.

Pellagra, as we know it today, is a symptom complex which is due to a variety of deficiency states and it is our impression that specific symptoms are due to specific deficiencies. In other words:

The dermatitis of pellagra is due almost entirely to a deficiency of nicotinic acid.

The mucous membrane lesions are due almost entirely but not completely to the lack of nicotinic acid.

The neuritic symptoms are due to inadequate B1 and possibly B4 in the diet.

The heart symptoms are due to the lack of B1.

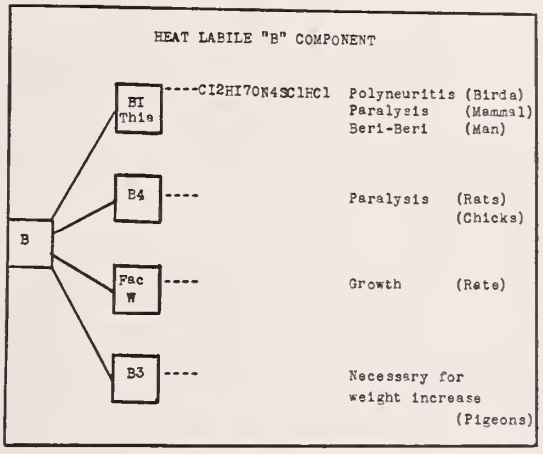
The chilitis or sores and cracking at the corners of the mouth are due to B2 or flavin deficiency.

Muscular weakness may be due to inadequate B6 and pantothenic acid.

Therefore, in examining a pellagrous patient, it is necessary to determine which symptom is predominant and which is present in a lesser degree.

In Table IV is a list of symptoms which are caused by specific deficient vitamins.

A full blown case of so called pellagra can be recognized at a glance, but it can be readily seen that patients may appear early to the doctor with a multiplicity of vague deficiency complaints, without stigmata of typical pellagra. It is these borderline cases which I wish to discuss in detail.



Deficiencies should be suspected in the indigent, in patients with eccentric dietary habits, patients with diseased bowels, or those recovering from an operation or severe accident, alcoholic addicts and in diseases which increase the metabolic rate.

The physician should keep in mind the seasonal variation of pellagra. A patient who presents himself in the spring or fall, might show a typical case of pellagra with

the dermatitis, stomatitis, diarrhea, abdominal disorder and nervous symptoms, whereby, if he consulted his physician in mid-winter, he might complain of abdominal discomfort, nervous symptoms and fever blisters.

Another circumstance may occur when the patient has suffered an infectious disease, severe accident or operative procedure, with a failure of recovery through a two to six months' period. A vitamin B deficiency must constantly be kept in mind under such circumstances. He usually relates a history of anorexia, occasional vomiting, weakness, fatigue, paresthesias, crawling sensations, recurrent sore tongue or mouth, dypsnea, tachycardia, loss of memory, depression, burning of feet or water eyes, etc.

The third type of case is the alcoholic, who refuses to eat when he is drinking. These cases usually present the early symptoms of beri beri, namely: loss of weight and appetite, burning of feet, numbness of the feet and ankles, extreme fatigue, shortness of breath, palpitation and instability. Examination of such a patient may show a loss of knee kicks, partial toe drop, anaesthesia of the limbs, irregular and enlarged heart, with low or inverted "T" waves in leads 11 and 111 on electrocardiagraphic tracings. The tongue is heavily coated, the breath foul, while there may be ulcers of the tongue, mouth or throat.

If the case is more severe, he may lose control of the bladder; complain of paralysis of legs; numbness of hands; swelling and edema of legs and abdomen. He may be disoriented, confused or have delirium tremens. He may be unable to even swallow because of the severe inflammatory reaction of the mucous membranes. A severe diarrhea may be prevalent and sometimes the typical dermatitis. This patient may present beri beri, pellagrous and flavin deficiencies all at the same time.

The fourth type of borderline case is that individual who is a finicky eater; or because of religious ideas receive insufficient amounts of vitamin B in their diet to inhibit deficiency symptoms. The diet may become less sustaining for a week or two and abdominal discomfort develops worse than usual. They then proceed to blame certain foods and as time goes on, the diet is still more voluntarily reduced until the patient may be subsisting on soups or refined cereals. Rarely do these cases present typical symptoms. They complain of abdominal discomfort, sever constipation, gas on the stomach, enemata and physic habits, fever blisters, vaginitis, paresthesias, and innumerable nervous phenomenon.

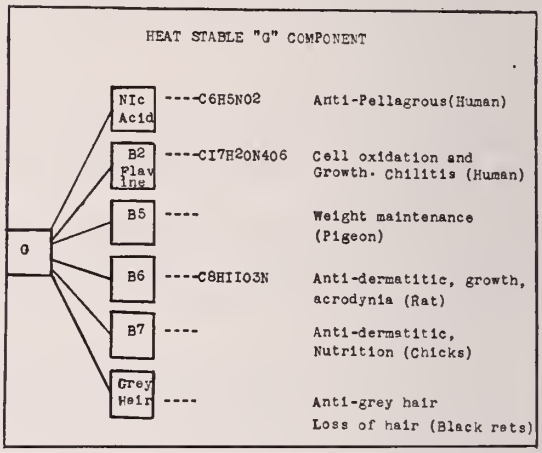
One can now see that the treatment of pellagra varies as to the symptomatology. If the dermatitis is present, nicotinic acid should be the predominant drug supplemented by Vitamin B1 and possibly riboflavin. If the neuritis is in the foreground, the drug of choice should be B1 supplemented with nicotinic acid. If chilitis is predominant, riboflavin must be given in large doses supplemented with nicotinic acid and possibly B1.

The dosages which are recommended are as follows:

DRUG DOSAGE IN TYPICAL PELLAGRA

Dermatitis (severe
- Nicotinic Acid 300-500 mg. a day
- Thiamin Chloride .. 20- 30 mg. a day

Neuritis (severe
- Thiamin Chloride .. 20- 30 mg. a day
- Nicotinic Acid 150 mg. a day



Chilitis
- Riboflavin 5- 50 mg. a day
- Thiamin Chloride .. 3- 9 mg. a day
- Nicotinic Acid 150 mg. a day

Deficiency Encephalopathy
- Nicotinic Acid 500-1000 mg. a day
- Thiamin Chloride .. 5- 10 mg. a day
- Riboflavin As necessary

DRUG DOSAGE IN BORDERLINE PELLAGRA

Whole Yeast Compounds in abundance
- Nicotinic Acid 150-300 mg. a day
- Thiamin Chloride .. 3- 20 mg. a day
- Riboflavin 3- 6 mg. a day

Approximately 25,000-100 mg. Nicotinic Acid tablets have been given to 200 pellagrans in the University Hospital Out-Patient Department without a single severe reaction; however, Dr. Chen (8) reports that daily administration of 2 grams of Nicotinic Acid a day for 20 days to two dogs resulted in death. The drug is, therefore, definitely toxic in large doses. Spies has given as high

as 2000 mg. of Nicotinic Acid (9) a day with no untoward effect. Sydenstricker, Schmidt and Fulton (10) state they have noted a moderate fall in blood pressure of from 10 to 30 mm. in an occasional case. They also state that there usually is an increase in the gastric acidity following administration of the drug.

Nicotinic Acid, according to Spies and Stone, increases the temperature 1.5-2 degrees over the face and neck. Occasionally it may cause nausea, vomiting and increase in the rate and depth of respiration. No constant changes in blood pressure were noted. Four out of eight had an increase in peristalic waves after Nicotinic Acid therapy. There was also noted an increase in the gastric tonus and a decrease in the size of the stomach with increase in gastric acidity. Other observations were improvement in constipation and decrease in radiation sickness. No increase in the CO2 combining power and no increase in nicotinic acid level of the blood was noted. The majority of the patients complain of burning and flushing of the face 15 to 20 minutes following a 100 mg. dose and lasting 15 to 20 minutes. Minor reactions noted were burning of soles and palms, paresthesias, salivation, slight tachycardia, dypsnea and substernal oppression.

I found in testing 13 individuals, there was no constant change in the calcium or phosphorous blood levels for two hours after the administration of 100 mg. of Nicotinic Acid to pellagrous or no pellagrous patients. Therefore, we did not feel that the blushing and tingling was due to the rapid mobilization of calcium.

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TABLE IV

Nicotinic Acid	B1 or Thiamin	B2 or Flavine
Dermatitis	Neuritis	Chilitis
Mucitis	Burning of soles	Red lips
Stomatitis	Weakness walking	Palor mucosa
Vaginitis	Anaesthesia legs	Maceration of corners of mouth
Glossitis	Anaesthesia arms	Fissures of corners of mouth
Mucocolitis	Hyperesthesias	Fatigue
Rectitis	Lost reflexes	Weakness
Encephalopathy	Muscle atrophy	Comedomes of
Memory loss	Toe drop	mouth
Delusions	Sphincter Dis.	alae nasae
Confusion	Heart Irregularity	lids
Delirium	Palpitation	ears
Mania	Dypsnea	malar prom.
Paranoid Trends	Tachycardia	Visual Disturb.
Cog Wheel resistance	Edema	
	Pulmonary rales	
	Pistol Shot pulse	
	Enlarged heart	
	Electrocardiographic change	
	Gastro-intestinal	
	Appetite loss	
	Anorexia	

The Value of Metrazol Convulsive Shock In Psychiatric Therapy

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From time to time new treatment procedures are presented to the medical profession which are so different from all of the past experiences of medical science that their standardization and acceptance or rejection may take many years. Such a procedure is metrazol convulsive shock, which was first proposed by von Meduna[1] in 1935. In spite of the fact that tens of thousands of individual procedures have been given to thousands of patients, the procedure has not as yet been standardized, nor has it been accepted or rejected as yet by practicing psychiatrists as a group.

Metrazol convulsive shock could and probably should be compared to surgical procedures. The decision between surgical interference and expectant, supportive medical therapy usually is reached by the analysis of several questions. Should surgery be resorted to as a life-saving procedure? Should surgery be resorted to for economic reasons —that is, should a chronic, inflammatory condition be corrected when possible by a surgical procedure which carries with it some risk but which quickly, if successful, returns the individual to society as a producing unit? Or should one wait for months for natural forces to correct the condition with little risk to the patient, but with the knowledge that there will be a heavy expense and a long period of non-productivity if the more conservative course is followed? This latter factor frequently tips the scales in favor of the surgical decision, which carries with it some risk, but which, when successful, results in a minimum of expense and a minimum period of non-productivity. Such factors are of importance when the newer surgical treatments for tuberculosis, for example, are considered. There is also the indication for surgery which is the correction of chronically hopeless defects which, if not corrected, will result in a lifetime of chronic incapacity, inefficiency and ill health.

When the physician-surgeon is faced with the necessity of making such a decision, he balances the needs against the risks, and when the risks are minor he would be derelect in his duty to his patient if he did not institute surgical measures, even though he knows that such procedures have both a small complication and a slight mortality rate.

When the physician-psychiatrist is faced with a problem, he must weigh these factors against the risk of complications and mortality from the procedure that he has in mind. First, what is the expected complication and mortality rate of the condition itself as compared to the rates of the procedures which he has in mind? Secondly, what are the economic considerations which must influence the choice between a long period of illness with a small per diem cost but a large total cost, and a short period of illness with a relatively large per diem cost but a comparatively small total cost? It must also be taken into consideration that if earning power and productivity are lost too long, the individual may not be able to return to a full economic life because his farm, his business, his contacts or his job may be lost as the result of his long period of inactivity. Speed of recovery is at times, therefore, a vital economic consideration.

Thirdly, what are the ultimate possibilities of recovery with or without the procedure? That is, in addition to the above considerations, what is the recovery possibility of the patient without the procedure as compared to the recovery possibilities if the procedure is given?

Metrazol convulsive shock was proposed originally for schizophrenia. The original statistical results were approximately equal to the first reports on insulin shock therapy and, because it is easier to give and far less expensive than insulin shock, about three years ago it was widely accepted and is still widely used in the treatment of schizophrenic reactions. However, the complication rate is much higher than in insulin shock, and in experienced hands the mortality rates should be about equal. The quality of the results is not good, as shown by Eisner and Orbison[2], who reported upon the results of personality evaluation (Rorschach method) upon 38 schizophrenic patients who were tested before and after their courses of met-

razol shock. They concluded that, while these patients showed a superficial clinical improvement, the Rorschach evaluation did not parallel this, but showed that fundamentally these patients were still schizophrenics. Cases treated with metrazol alone are seldom returned to productivity for long.

Ross and Malzberg[3] concluded that metrazol produced even fewer recovered cases (1.6 per cent recovery and 9.9 per cent much improved of a total metrazol treated series of 1140 patients) than found in cases not treated by any shock therapy. (Control series of 3.5 per cent recovered, 11.2 per cent much improved). This viewpoint is confirmed by a cooperative report on 759 patients, published in Germany[4], analyzing 560 cases treated with insulin, 132 with metrazol, and 67 with both. The insulin series showed 37.7 per cent symptom free and 28.9 per cent improved. The metrazol series showed 18.9 per cent symptom free and 37.1 per cent improved. Menninger[5] reports that only 17 per cent of his series of schizophrenics showed a social remission after a course of metrazol therapy. Bateman and Michael[6] conclude that: "metrazol therapy was seemingly disappointing in the majority of instances," i.e., in the treatment of schizophrenia.

The results at the Neurological Hospital showed, in a series of 12 patients, that 3 made a complete recovery, 2 showed enough improvement to go home, 3 improved slightly, and 4 did not improve at all. However, only 2 of these patients have maintained their improvement, so that we find 85 per cent of this series in a state hospital or at home, completely incapacitated. Since these patients were treated some months ago during the period when metrazol was being tried extensively, enough time has elapsed to show that in this small series metrazol was not an effective treatment in schizophrenia if sustained results are desired. The real objective of therapy in the psychoses is complete recovery. Improvement is gratifying, but unless the patient is returned to his former life, capable of living normally and efficiently, it is my own belief that a satisfactory result has not been obtained. Therefore, metrazol convulsive shock does not satisfy our criteria for active interference in schizophrenia, and it is being discontinued gradually as the sole agent in the treatment of this reaction type. However, in the affective reactions, such as manic depressive psychoses, involutional melancholia, agitative and pre-senile depressions, metrazol convulsive shock does fulfill all of the criteria as an active treatment measure of the "surgical interference" type.

The first question in the analysis of treatment indications is the most difficult to answer, because cross analyses comparing active and expectant treatments of the affective psychoses from the standpoint of complications and mortality have not been made. Nor does the literature contain sufficient statistical analysis of either form of therapy to make comparisons accurately. However, there is some material available.

The affective psychoses apparently have a mortality rate of about 10 per cent during expectant treatment. Death results from suicide, inanition and exhaustion, intercurrent infection which has been made possible by the lowered resistance of the individual and from the breakdown of metabolic factors which seem to be an integral part of the condition.

These patients almost invariably lose weight. Some of the weight loss is due to the decrease in amount of nourishment intake and the overactivity of the patient. There is also another factor which has never been determined conclusively. It is not glandular, as far as we know. These metabolic states lay the patient open to complications. While these complications are not always fatal, they are distressing and their management is expensive. This type of complication is common in the involutional melancholia and the agitative depressive types, and does occur in the manic depressive group. Only about 15 per cent of the cases progress to the point of pellagra, beri beri or to other forms of severe metabolic breakdowns.

Other types of complications, such as trauma from attempted suicide, infections which can be and are controlled, etc., occur in probably 10 per cent, so that the total complication rate for severe side effects is approximately 25 per cent.

The combined complication and mortality rate is, therefore, somewhere in the neighborhood of 35 per cent. Since involutional melancholia and pre-senile agitative depressions, as well as the simple melancholias, are chronic and sub-acute conditions lasting for from 18 months to 3 years on the average in the expectantly treated cases, the question of adequate nursing care and medical supervision is an important consideration. The greater the amount of care and the more expert the supervision, the less the morbidity and mortality rates. The above figures are taken from reports and observations on patients who did not have the advantage of adequate care in a psychopathic hospital. The hospitalized patients have a much lower percentage of both rates, but they must be hospitalized for long lengths of time in order to control and prevent the complications. However, even in the best of mental treatment hospitals, suicide and traumatic com-

plications occur, in spite of watchfulness and care. Metabolic complications are seen frequently because of the unknown factor, so that there is a rather high complication and mortality rate in the adequately hospitalized, expectantly treated patient.

Metrazol convulsive shock has its own complication and mortality rates. Complications which have been reported are fractures of the long bones and or their articulations, cardiac arrhythmias, and compression fractures of the spine. A few pulmonary complications have been noted. Hamsa and Bennett[7], Rechtman and Winkelman[8], McAdam[9], Polatin, Friedman, Harris and Horwitz[10], Bennett and Fitzpatrick[11], Gross and Gross-May[12], and Zeifert[13] have all made reports or written discussions about these various complications. Statistical analyses of this material are not possible. Rates of incidence in the various reports vary from 3 to 40 per cent. With the passage of time the exact complication rates for these various forms of complications will be worked out and a careful comparison can then be made. However, taking the 40 per cent figure as the absolute top, a breakdown reveals some very interesting material. Fractures of the long bones are the most serious complications. Healing is always to be expected, however, and in the three cases at the Neurological Hospital which developed this complication, the treatment course was completed and the patients all went forward to a complete remission[14]. One of these cases relapsed mentally afterwards, but the other two are in a state of complete functional adjustment, both physically and mentally.

Various technical improvements have been proposed by Hamsa and Bennett, Rechtman and Winkelman, Bennett and Fitzpatrick, Bennett[15], Rankin[16], and others, which have reduced the incidence of these complications to a bare minimum and in time may eliminate them completely. McAdam's three cases of cardiac decompensation cleared up completely, and he reported a case with a right ventricular preponderance and a history of repeated asthmatic attacks for five years that was given a course of metrazol without developing any signs of arrhythmia or other cardiac disability. We have treated two cases with serious heart ailments, one 84 years of age, without any signs of cardiac embarrassment developing[14]. Both made good clinical recoveries.

Fractures of the spine are compression in type. While they would seem to be severe they seldom are, and frequently are asymptomatic. Very rarely serious injury results, but in the vast majority of the cases the symptoms quickly clear up and the patient is no worse for his experience. The same measures which have been proposed to lower the incidence of the long bone fractures are also lowering the rate of this particular complication.

Pulmonary complications are very rare, and consist of inhalation abscess and a rare pulmonary embolism. These complications are so rare that almost no information is as yet available about them.

From the standpoint of incidence of nonfatal complications, it would seem that the complication rate is somewhat higher than that to be expected by conservative treatment. Mortality rates show a wide preponderance in favor of active treatment. Isolated deaths from metrazol shock have been reported, but they are so rare as to equal approximately the expected normal death rate of the population as a whole. We can say definitely that the 10 per cent expected death rate of these conditions is eliminated by the good results obtained from metrazol convulsive shock in the affective reactions.

Economic factors favor strongly the active treatment method. Palmer and Sherman[17] have reported that in their opinion cases of involutional melancholia that do get well can be expected to have a course of from 18 months to three years when they do not receive active treatment. The barest minimum of private type care is the nursing home, operated by a graduate nurse at its best, and by a completely untrained layman at its worst. The minimum price for this type of care is $10.00 per week. At the minimum cost and the minimum expected recovery time, therefore, the total expected cost would be $780.00. In private sanitariums where the services are of the custodial type, i.e. little or no active treatment, the rates range from $25.00 to $35.00 per week at a minimum, and the total cost would be from $1850.00 to $2630.00. The economic loss of non-employment or non-productivity or, perhaps, the breaking up of the home during the prolonged illness, must be added to this financial burden.

Metrazol shock therapy in the chronic melancholias and depressions works definitely to the economic advantage of the patient and his family. The average length of time that these patients spend in an active treatment hospital is about six weeks. The average total cost of this type of hospitalization is approximately $360.00 in the uncomplicated case which requires no extensive period of preparation. These cost and time factors have placed a chronic, sometimes incurable type of psychosis into the class of the moderately severe medical and surgical problems such as pneumonia, cholecystectomies and prostatectomies. The loss of time from business or position is reduced to a minimum, so

that the patient can return to the old environment without the loss of many contacts.

The above figures deal primarily with the older type patient of the involutional melancholia and the pre-senile agitative depression type. The simple manic depressive reaction is usually a different problem. These patients are subject to recurrent attacks and seldom, if ever, make a satisfactory social or economic adjustment. Every time they get started along a stable path they have an attack which completely disrupts their life plans. Metrazol shock is used in the treatment of these cases as an aid, but not with the same objective as in the older patient. The manic depressive can be controlled more easily, can be brought to a more cooperative stage so that exhaustion and malnutrition can be avoided and the individual attack terminated much quicker, but there is no evidence to show that future attacks can be prevented. With the other types, that is, involutional melancholia and the pre-senile depressions, recovery is complete and apparently permanent in the large majority of patients, which means that metrazol convulsive shock is a true specific therapeutic agent.

The third question can be answered quickly. Palmer and Sherman have reported that only 30 per cent of the melancholias of middle life and the pre-senile years can be expected to get well under expectant treatment. Freeman[18] and others have made the same reports. The recovery process usually stretches for from 18 months to three years in those few who do recover.

Various endocrinologists and a very few psychiatrists have advocated the use of estrogenic substances in the treatment of these conditions. Ault, Hoctor and Werner[19] have been the chief proponents of this form of therapy. Psychiatrists have almost universally discredited this work. Palmer and Sherman, Schube, McNanamy, Houser and Trapp[20], and Palmer[21] and others have reported completely negative results in the use of theelin and other estrogenic substances in the treatment of these mental conditions. Our own results have confirmed this viewpoint[22],[23]. Certain simple depressions which develop during the menopause may respond to estrogenic material, but the response, if it is going to occur, is almost immediate, and if results are not seen in three weeks this form of therapy should be discontinued and more active measures, such as metrazol shock, should be started.

During the past two and one-half years we have treated 53 patients with severe affective psychoses with metrazol shock. Thirty-seven or 69.8 per cent, made a complete recovery. Fourteen or 26.4 per cent, recovered sufficiently to return home and resume part of their previous activities. This makes a grand total of 51 or 96.2 per cent of these patients who had a satisfactory and rapid result. Comparing this to the 30 per cent possible from expectant treatment and we see that metrazol shock is almost a specific therapy for a type of condition which formerly was chronic and carried a poor prognosis.

These recoveries have not been completely sustained, however. The six months' follow-up shows that of those patients, 39 of the 53 cases had been at home six months or more, and that 24 or 61.5 per cent are still completely well, and 5 or 12.8 per cent are in a state of social remission. This is a total of 29 out of 39, or 74.3 per cent who have had a sustained good result of six months. This is a figure that is 2½ times as large as the results from expectant treatment.

Twenty-four of the 39 cases have completed one year or more. Of these, 13 or 54.1 per cent are in a state of complete recovery, and 5 or 20.8 per cent are in a state of social remission. This gives an over-all percentage of 74.9 who have sustained good results for one year or more. The fact that the five cases of social remission in the six months' follow-up all appear in the one year follow-up disturbs the percentage figures somewhat, but it would seem from the comparison of these figures, 74.3 per cent for the six months' follow-up group and 74.9 per cent for the one year group that if the individual patient can sustain his good result for six months it probably will be permanent. The group which was treated two years or more ago is too small for accurate analysis.

Conclusions

1. Metrazol convulsive shock is not the treatment of choice in the average case of schizophrenia.

2. Metrazol convulsive shock carries a combined complication and mortality rate that is no higher than the combined complication or mortality rate from expectant treatment of the affective reactions, i.e. manic depressive psychosis, agitative depressive psychosis, involutional melancholia, and the simple depressions.

3. Metrazol therapy as given in the better class of private hospitals and sanitariums is cheaper as to total cost than the very cheapest form of expectant therapy in any type of private institution, i.e. seclusion and protection in a nursing home without medical supervision.

4. Metrazol therapy increases the probability of sustained permanent recovery 2½ times in the chronic affective reactions as

compared to expectant therapy in the best hospitals and sanitariums, i.e. rest, occupational therapy, recreational therapy, hydrotherapy, seclusion, estrogenic substances, and maintenance of nutrition and hygiene.

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Sinus Disease In Children*

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Sinus disease in children is often taken lightly or completely overlooked. Delay in recognizing its presence retards the recovery of the child. Sinusitis is generally present in those who have frequent colds. One author (1) is of the opinion that some degree of sinusitis occurs with practically every cold. Campbell (2) considers the condition as the most common of infantile diseases and considers it an important factor in producing otitis media. Clinically, it is present with definite findings in many more cases than is often recognized. It is frequently overlooked on account of its insidious development during some other infection and because the predominant symptom, nasal discharge, is so commonly considered unimportant. It is being increasingly recognized (3) that infected nasal sinuses rather than infected tonsils and adenoids may be responsible for the intractable catarrhs of the nose and upper respiratory tract so often seen in childhood.

*Read before the Section on Obstetrics and Pediatrics Annual Meeting, Oklahoma State Medical Association, May 8, 1940, in Tulsa.

ETIOLOGY

The development and anatomical relations of the sinuses must be kept in mind as it is a different situation in childhood than in adult life. This has an important bearing on all phases and especially treatment. The frontal sinuses in early life may not be in the frontal bone, but in reality one of the anterior cells of the ethmoid sinus. The relationship of the floor of the nose and maxillary sinus varies at different ages. This is an important fact to be remembered in interpreting clinical findings. Each sinus has its starting point at a definite area along the nasal meatus, all developing from the middle and superior meatus except the sphenoid which develops from the dorsocephalic part of the nasal fossa.

The size of the sinus is in proportion to the age. The frequency of the early infec-

tion of the maxillary sinus is due to the fact that it is present at birth. The cavity may become infected due to blocking of its orifice. The ethmoid, sphenoid and frontal sinuses develop in order.

There is a number of etiological factors involved. Diseased tonsils and adenoids causing interference with drainage, forceful blowing of the nose, anatomical abnormalities causing interference with normal function of the nose, lack of proper food and vitamins, internal secretions, poor environment and living conditions and infection with or without allergy. Hansel and Chang (4) report 13 per cent of an unselected group of 200 children with nasal allergy. Mitchell (5) feels that environment is especially important. He found fewer cases in orphanages, dispensaries and charity practice than in the well-to-do. He explains this as due to the fact that poorer children are constantly in contact with diseases of the respiratory tract and therefore gradually become immune. However, we have a number of cases in children from poor living conditions which are in contact with upper respiratory infections and do not seem to develop an immunity. Resistance to all infections is lowered and no doubt the open gas heater with no flue connection has a bearing on the situation in this section of the country. Climate and season have an influence involving a predisposition to colds and upper respiratory diseases. Mitchell (5) reports that frequent findings of sinal activity in children who have lost their tonsils leaves little question that removal of tonsillar tissue in early life predisposes to sinusitis. The condition often is found in children who have had their tonsils and adenoids removed, but it is a question if their removal is the direct cause of sinusitis. There was pathology in the nose and throat and the physician felt that removal of the tonsils and adenoids was the remedy. Many of us are now of the opinion that we have erred in the past in advising the operation on some patients. It is often just an incident in the child's illness rather than the cause.

The pathology of sinusitis and its complications is essentially the same in children and adults. The infection begins in the nasal mucosa, spreading by continuity of surface to one or more of the nasal sinuses and sometimes to the middle ear. Two important factors are the resistance of the patient and virulence of the invading infection. Persistent infections may lead to changes in the mucosa. It loses its ciliated structure and polypoid degeneration occurs.

Symptoms

There is no definite chain of symptoms characteristic of the condition. There may be nasal stoppage or a feeling of fullness of the head with nasal discharge. Pain and headache may be brought on by a closed empyema. Headache is not so frequent as it is in adults. Sneezing often is present, especially if there is associated nasal allergy.

The temperature may be high or low according to the virulence of the organism and the degree of drainage. The acute cases often are overlooked because the drainage is into the posterior pharynx and is swallowed. A cough may be quite troublesome at night but of little consequence during the day. This is often the case when the cold seems to persist. Most of the cases recover with comparatively few becoming chronic. Edema over the affected sinus and especially swelling in the loose subcutaneous tissue and redundant skin over the lower lid in its outer third (7) is present in some cases.

In a series of 296 children with sinus disease, Kerly and Lorenze (6) found the following complaints:

133 frequent colds.
71 chronic cough and nasal discharge.
31 asthma.
25 rheumatism.
17 persistent slight elevation of temperature.
7 recurrent headache.
4 anorexia.
3 acute coryza.
1 suppurative ethmoiditis.
1 persistent hoarseness.

Sinusitis was demonstrated as follows:

The frontals only in 3.
The maxillaries only in 149.
The maxillaries and ethmoids in 121.
The ethmoids only in 21.
The sphenoids in 1.

Diagnosis

The clinical diagnosis is not always easy in children. A number of cases will be missed by both the pediatrician and rhinologist if only the usual methods of examination are employed. Transillumination is of value if positive evidence is obtained. However, if there is reason to suspect sinusitis the examination should not stop here but include radiographic study. This must be made very carefully and interpreted by one with considerable experience to be satisfactory.

In the chronic case the history is of great value. Usually the child is under weight, is indifferent to activities of other children of the same age. There may be a low grade temperature, poor appetite, a persistent cough due to the nasal discharge and peribronchial infiltration, anemia, and posterior cervical adenitis. Raia (8) found both clinical and roentgen evidence of infection of the sinuses in 48 of 52 cases of bronchiectasis.

It is important to rule out allergy in sinusitis as the treatment will be ineffective if this is not taken into consideration. The examination should include a study of the nasal secretions for eosinophils. Hansel and Chang (4) believe that in the absence of hay fever and asthma, nasal allergy and allergic bronchitis frequently are overlooked and that tonsillectomy is often performed because the symptoms are taken for those of infection. They estimate 13 per cent of the annual total of more than a million and a quarter of tonsillectomized persons are unnecessarily subjected to tonsillectomy every year.

TREATMENT

The basic fact is the recognition that sinusitis exists. In the acute stage the child should be put to bed, kept very quiet and plenty of fluids given. If the fever is high, acetylsalicylic acid in appropriate dose for the child's age will reduce it to a reasonable level and make him more comfortable. If there is pain, codeine or Dover's powder will give relief. A study of the bacteriology may indicate either sulfanilamide or sulfapyridine. A number of cases this spring has been positive for pneumococci and sulfapyridine has been of great value. There is some difference of opinion as to the local treatment during this stage. Some feel that very little, if anything, should be done as the congestion is of value in combating the infection. No doubt this is important, but much relief can be obtained by pneumotization and this is accomplished by shrinking the nasal mucous membrane. It is important to remember the danger of oily vehicles. A physiologically balanced one per cent ephedrine used according to Dr. Parkinson's method (9) is satisfactory. Many feel that neosynephrin hydrochloride solution is even more satisfactory. It is essential that the use of these drugs be not prolonged over too long a period of time. Irrigation is not indicated at this stage. In the subacute cases suction carefully applied will aid in removing the discharge which is quite troublesome. If these cases are recognized early and carefully treated most of them will recover and not pass into the chronic stage.

The chronic case should be treated in a palliative manner before radical surgery is attempted. If the tonsils and adenoids are chronically diseased they should be removed. The general condition of the patient should be improved as much as possible with proper diet, vitamins and living conditions. A cold, damp climate is a poor one for a patient with chronic sinus disease. Exposure to upper respiratory infections is to be avoided. If colds can be avoided there is a better chance of normal development of the sinuses and recovery from the chronic condition. If the conservative treatment, general and local, fails then operative drainage is indicated. The operative procedure of Shay (10) may be considered.

The results from the use of vaccines have not been highly satisfactory. Autogenous vaccine from a carefully obtained culture offer the most that is to be obtained in this phase of treatment. X-ray treatment is receiving considerable attention and, from reports, no doubt it is of some value in selected cases. It is difficult to exactly evaluate this procedure at present. McLendon and Rathbone (11) are impressed with their results in a limited number of cases. The allergic condition, if present, should be worked out. If this is not corrected as much as possible, and it may be difficult to desensitize the patient, very little progress will be made in relieving the patient of the sinusitis.

It is important that these cases be kept under observation and treatment as long as they continue to have sinusitis. Every effort should be made to impress the parents with this fact so that they will understand the importance of growth and development of the sinuses to normal size. The progress can be followed with the x-ray. Sometimes there is some question whether the case is cured even with the picture. Such cases should be under observation over a longer period of time.

CONCLUSIONS

1. Sinusitis in children is often overlooked.

2. The symptomatology is varied with no characteristic chain of symptoms.

3. A carefully taken history is a valuable aid in the diagnosis especially when allergy is a factor.

4. The treatment varies according to the stage of the sinusitis with radical measures used only after palliative treatment fails.

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Discussion*
"Brain Tumors I've Met"

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It has been a pleasure to be a guest of your section and hear this presentation of material relative to the field of neurological surgery from a member of your group. It has been a particular pleasure to hear something of the signs and symptoms of intracranial tumor as observed by someone on the firing line, so to speak. Quite often the patients we see, just as in the cases cited by the essayist, have already had a tentative diagnosis and we are then confronted with working out some of the details. You are charged with the responsibility of seeing the patient first or by reference from the internist or general practitioner. He or she will complain of one or more symptoms of intracranial disease, any one of which may be due to any one of a number of extra-cranial diseases. Your position then becomes particularly important in making the differential diagnosis early. On the one hand, you do not wish to delay with the intracranial tumor case until irreparable damage has been done, to expose them to the expense of unwarranted temporizing methods or, on the other hand, rush every patient off to the neurological surgeon without just grounds for your tentative diagnosis of brain tumor. Too often they will return after having been subjected to considerable fear, time, and expense to hold you responsible for what in the end they may decide was an unwarranted conclusion on your part.

How then may you best approach these matters? First of all, the nervous system is so constructed that with an understanding of the anatomical and physiological factors involved, one may go a great way in evaluating symptoms involving the cranial nerves, the sensory and the motor projection pathways. Secondly, being housed within the cranial vault a rigid case, certain dynamics concerning the pressure and pathways of the cerebro-spinal fluid are important, and must be given due consideration. Likewise the dynamics of circulating blood within the head, both arterial and venous, is a prominent factor in intracranial symptomatology. Thirdly, an understanding of the pathological processes, the rapidity of change in such processes, and the route of entry as in the case of infection, better prepares one to understand the patient's problem. Fourth, trauma and the part it plays in producing intracranial changes may give one the key to distress from the brain lesion.

With all of the above one must resort to physical and neurological examination, and re-examination to prove or disprove symptoms that may have been encountered. Frequently laboratory procedures are necessary for confirmation, or to rule out a disease process.

We make free use of the routine laboratory and frequently ask for special tests such as blood Wassermanns, sedimentation rate, cerebrospinal cell count in the instances where spinal puncture is not contraindicated. Wassermann, colloidal gold test, total protein, determination, sugar and chloride determination, and basal metabolic determination, may be found helpful when indicated. One rarely resorts to such special tests just as a general investigative procedure with any degree of satisfaction.

The X-ray is of invaluable aid. Occasionally it will reveal a tumor shadow, but more often changes in the structure of the skull itself helps in determining the degree, duration, and actual nature of the intracranial process. Of course, the advent of air studies by encephalography, and ventriculography have revolutionized neurosurgical diagnosis. In time the use of the electroencephalogram may be just as useful and possibly of greater use than air studies, but to date this procedure is still in a more or less experimental stage.

With all of the present knowledge based on the experiences of such great pioneers in the field of neurological surgery as the late Harvey Cushing, my chief Ernest Sachs, Walter Dandy and many others whom you know, there still is no "Royal Road" to diagnosis in intracranial disease. One must first be mindful of the possibility of the presence of a brain tumor, unafraid to consider such a diagnosis, and then carry out the necessary studies for diagnosis as early as possible. The development of the accepted present day technique of treatment has so far improved

*This article is a discussion of Dr. E. H. Coachman's paper, "Brain Tumors I've Met", which appeared in the October issue of The Journal.—The Editor.

the outlook that one rarely hesitates to submit to surgical and radio therapeutic measures, and in a surprisingly high per cent of cases gratifying results will be the reward.

A discussion of specific symptoms and signs of tumor of the brain would reach such proportions that we would lose track of the value to be obtained by consideration of the facts placed before us by Dr. Coachman, in the presentation of these three interesting cases. I should like to call your attention to a few pertinent points in diagnosis noted as these case reports were given.

In the first case, there were few symptoms and signs. He consulted the doctor because of disturbed vision and on examination a bilateral papilledema was observed and recognized as a sign of an intracranial tumor.

Neurological examination gave a few pathological findings that were confusing for localization of his tumor. Ventriculography revealed an internal hydrocephalus which we recognize as evidence of a posterior fossa tumor. At operation which we found necessary to carry out in two stages, the diagnosis was verified and a meningioma placed laterally in the posterior fossa and completely filling and occluding the right lateral sinus for a distance of 5 cm. was removed. This type of tumor offers an excellent prognosis when complete removal is possible.

The second case presented a rather complex problem in that she was apparently having symptoms of the menopause. Headache, vomiting, aphasia, right homonomous hemianopsia and uncinate attacks are positive symptoms of a localized lesion of expansile type in the left temporo-parietal area and are readily recognized as such in contra distention to the nervous manifestation of the menopause. In cases of this age group careful search should be made for primary carcinoma elsewhere as metastasis to the brain are occasionally encountered. Pelvic, gastrointestinal and chest studies were carried out with negative results. The tumor was verified at operation and found to be a malignant form of glioma, but she enjoyed the greater part of the year that she lived following operation and irradiation by deep X-ray.

I did not have the pleasure of studying the third case. From the description in addition to a fairly characteristic history and neurological pattern of an auditory neuroma, the X-ray revealed a positive finding that confirms the diagnosis, namely the erosion of the petrous ridge at the site of the internal auditory meatus. As a rule these tumors are best managed by an intra-capsular enucleation giving them from three to ten years' freedom from symptoms.

Thank you for your attention and for the courtesy of the floor to give what I fear may have been a too lengthy discussion of Dr. Coachman's excellent paper. I have enjoyed being a guest of your section.

Modernizing Medical Public Relations*

HARVEY T. SETHMAN, *Executive Secretary*
Colorado State Medical Society

DENVER, COLORADO

This paper is entitled "Modernizing Medical Public Relations" and perhaps I should mention first, negatively, what I believe to be the average physician's misconception of a public relations program. I find that a majority of physicians and perhaps also a majority of the general public think of a public relations program in terms of press agents, four-color magazine advertisements and equally flamboyant radio programs, high pressure salesmanship, high priced so-called contact men, and legislative lobbies.

In rare emergencies a public relations program may include any or all of these activities, but if the experience of well-organized state medical societies in past years can be used as a criterion for the future, such emergencies seldom arise oftener than once in a generation. Colorado met one such emergency in 1922, defeating an anti-vivisection camuaign. Colorado met another such emergency in 1938 and defeated a well-financed chiropractic group which tried to tinker with the State Constitution. Those two were the only such emergencies in seventy years.

But this is not my conception of a modern public relations program for a medical society. Rather, I think of a modern public relations program as service to patients and to the public in the traditional manner which the medical profession has always followed, *plus* an individual, county, and state society

*Read before the First Annual Secretaries' Conference, Oklahoma State Medical Association, October 27, 1940, in Oklahoma City.

sense of public responsibility, whereby each member of organized medicine thinks of his daily activities in terms of their relation to the whole public.

To put it another way, every time a physician sees a patient, he has an opportunity to carry out a job of public relations for himself and his medical society. Every time a County Medical Society officer receives a letter from outside of his medical society membership he has an opportunity to do a public relations job for his county society and his state society. Every time a state medical society officer receives a communication from outside the membership of that society, and sometimes from within, he likewise has that opportunity.

To put it still a third way, I believe that a medical society's public relations program should consist of making the organization's information and services available to the public, letting the public know that this information and service is available, and then to a large extent letting nature take its course. Except in the rare emergencies mentioned, I do not believe in a medical society "pushing" public relations. There is nothing really new in this, but it serves modern needs.

A year ago in preparing a ten-year review of the accomplishments, and the failures, if any, of the Colorado State Medical Society, I obtained a composite opinion of state and national leaders concerning the principal activities of organized medicine since 1929. This was done by a questionnaire sent to past presidents of our own society, to all state secretaries who had served their states ten or more years, to recent past presidents of the American Medical Association, and to the American Medical Association headquarters executives who had served ten or more years in their respective positions. Each person was assured that the replies would be kept in strict confidence, and thus their thoroughly frank opinions were obtained.

The review made at that time concerned itself only with the organization work of medical societies, not with scientific advancements by individuals or by research organizations. That must be taken into consideration, but it still strikes me as significant that eleven out of twenty major accomplishments, and seven out of eight temporary failures, listed in the composite opinion drawn from those medical leaders, had to do with public relations. This should be evidence enough of the importance of public relations.

There are several points in what I conceive to be a modern public relations program for a county medical society:

The first point is perhaps the most important of all. The society must define one or more immediate goals which its public relations program is designed to reach. But back of all this, the foundation underlying all aims of every public relations program should be to increase public respect for and confidence in the medical profession. The medical society must be felt in public affairs. This, however, is too indefinite for the average individual to get his teeth into. There must be some one or more concrete aims which we may assume will change from time to time as the general political and civic trends change.

As a not too hypothetical example, let us assume that a county society right now elects as an aim, the defeat of attempts to bring about Federal socialization of medicine. Then every member of the county society must be made aware of that aim and must be thoroughly instructed by the county officers as to the technique of carrying the program into effect. Once that is done, the basic work of carrying out the program falls not upon the officers, not upon committees, not upon paid workers, not upon public relations counsellors, but upon the individual members.

Suppose that for one solid month Dr. A. takes three minutes' additional time with each patient to discuss socialized medicine. It is easy for him to open the conversation by asking, "What do you think of these socialized medicine plans being promoted in Washington?" Nine times out of ten the patient is already opposed to any plan which will deprive him of his right to choose his own doctor and he will say so. Then in two minutes the doctor can persuade that patient to write a letter to his congressman or his senator and, in many instances, to both. An important part of this program is for the doctor to note that patient's reaction and his promise or his lack of promise to help on the patient's history card. That in itself reminds the doctor the next time he sees the same patient to say, "By the way, did you write to Senator Jones?" Let me here warn against form letters or stereotyped messages. Every public official and his secretary can readily identify a form letter and he gives it no weight; but sincere, personal letters from constituents, when multiplied into the hundreds and into the thousands, are what make or break a legislative program in Washington. If every member of the Oklahoma State Medical Association inspired just a few such letters scattered over the next three months, it is as certain as tomorrow's sunrise that no Oklahoma vote would be cast in Congress for a system of socialized medicine.

Still another example of using this three

extra minutes with each patient might develop as follows: Dr. A. knows that his patient, Mrs. B., is active in one of the larger women's clubs. In less than a minute he can get her talking about her club's activities. Then comes his question: "By the way, what does your club think about socialized medicine?" If her club has devoted study to socialized medicine and is opposed to it, fine; then the question: "Has your club let the politicians know that?" Or suppose her club has not heard the medical profession's views on the subject — then the suggestion: "If you would call the secretary of our county medical society, he will get a good speaker on the subject for you."

That brings up the thought of a medical society speakers' bureau, which is simpler to operate than most physicians realize, and which I will discuss a little later.

I have dwelt on the socialized medicine idea in presenting the thought of three extra minutes with each patient for a month, because socialized medicine is a vital current issue. But it is only one example. Suppose your society elects for the next year to emphasize an immunization program for the schools, to sponsor a certain piece of state legislation, to gain support for a sewage disposal plant, to get funds for an addition to the local hospital — no matter what the project so long as it is a proper one for a medical society to support—the same techniques of gaining public understanding and building public support will apply. The individual doctor talking to his individual patient is the prime motive force in any medical public relations program.

Experience in many county societies over the country has shown that in spite of the tornado of propaganda directed against the medical profession, the majority of the general public approves of organized medicine's policies the instant those policies are explained. But it takes a few minutes of a family doctor's time to do the explaining, and then it takes his request to inspire action.

There are specific ways in which a county medical society can modernize its public relations, in addition to the work to be done uniformly by all of its members. We think automatically of press relations, of radio, and public speaking.

Weekly or other periodic press releases have been attempted by many county and state medical societies but in my opinion have usually failed to hit the mark. Press releases, as such, should be issued only when there is actual news to be transmitted, and a friendly discussion between a county society officer and the local newspaper editor will quickly bring about an understanding as to what is and is not general news from the editor's point of view. My preference is to let things develop by request from the newspapers, and these requests *will* develop, rapidly, if a simple plan is carried out and is thoroughly understood by each member of the medical society.

Let one, or at most, two men, be designated by the county society to give information to the press. In many instances this man can be the president of the county medical society, but in every instance he should be a man who has discussed such matters thoroughly with newspaper men and has the confidence of newspaper men. When a newspaper wants information about a medical activity, or wants local comment on a medical story originating elsewhere, the newspaper should know whom to contact and should know in advance that the information, if at all available, will be instantly forthcoming. When such a program has been inaugurated by and for the county medical society, direct quotation of the doctor who is the society's representative and the use of his name should always be permitted.

Radio programs must of course be limited to those county societies where radio stations are in operation, and in some instances will become the job of the state association. Except in real emergency, I question the advisability ever of buying radio time, or buying advertising space in a newspaper. A medical society is not organized for the purpose of selling itself or its members to the public. If it were, the buying of radio time and newspaper space would be justified. Rather, medical organizations exist to advance the science and art of medicine, and they are civic organizations looking toward the improvement of public health. Reverting back to an earlier remark, our society services therefore should be constantly *offered to* the public through the public's usual means of intercommunication but should never be *pushed upon* the public.

Any large county society whose major city has a radio station needs a radio committee. This committee can obtain from the American Medical Association a sizeable library of prepared five, ten, and fifteen-minute educational talks on every conceivable subject relating to medicine, public health, and medical economics. Every such radio committee should have a file of these talks and should index them carefully as to seasons, occasions, and special events. The committee should then organize and coach a small group of physicians who have good radio voices, so that they are prepared to deliver the talks on short notice. Then the committee chairman can go over the situation with the program director of the local radio station and explain to him what mater-

ial the county society has available for use at his pleasure.

Every radio station must under Federal law give a certain proportion of its time to educational programs as distinguished from commercial programs. Every station occasionally finds itself in the position of needing more educational material this week or this month to maintain the proportion. When the radio program director is aware that on short notice he can get an educational talk from the county medical society, you will be surprised how often a call for such a talk will reach your committee. Occasionally this will develop, as it has on two occasions in Colorado, to the point that a radio station will request a society to supply a weekly program for a period of months.

The American Medical Association's prepared radio talks can, and, in many instances, should be, rewritten by the local radio committee to localize them. In such rewriting any attempt to "advertise" the medical profession must be avoided or the talk will be very properly rejected by the radio station on the ground that it has become commercial instead of purely educational. Likewise, controversial subjects are to be avoided. From your state officers I learn that several county societies in Oklahoma are doing an excellent radio job.

Similarly, every county society of a reasonable size, say of twenty or more members, needs a speaker's bureau, in many instances simply a committee of three to five members. For perhaps the first year of operating the bureau, the prepared fifteen-minute radio talks available from the American Medical Association could be used as samples from which expanded talks could be prepared. The American Medical Association Bureau of Health Education also will supply material on thousands of subjects for the local bureau's use in preparing its own public addresses. The local committee could coach a small group of physicians for delivery of these addresses before lay organizations as representatives of the county society.

Whenever possible, such talks should include a few paragraphs explaining current activities of organized medicine, but again, advertisement of the profession, like "Be sure to consult your family physician in such a case," must be avoided.

When a group of physicians has been coached and is ready to serve, *not before*, a simple form letter offering such services might be sent to the secretary of all active lay organizations in the district: business mens' service clubs, womens' clubs, and orzations too numerous to mention. The program director for a club is frequently in a dither to find a program for next week, and a county medical society speaker's bureau is often the answer to his prayer.

Many active county societies, probably including some in Oklahoma, are already carrying out these very plans, but there is one other point which is more neglected than observed and that is the county medical society's interest in general civic affairs. How many times has your county medical society been asked to name a representative on the local Community Chest Drive, to sit in on a school conference, to appoint a member of a civic planning committee, to assist in some community survey such as a study of traffic accidents? These are just a few of a hundred possibilities. Each county society should be prepared to act, and act quickly, whenever such a request comes. Seldom, if ever, should such a request be declined.

If your society does not receive such requests, let us refer again to that extra three minutes with each patient. Doctor A. can politely inquire of the patient who is prominent in civic affairs as to what his group is doing. The first thing the doctor knows will come the remark, "Well, our Chamber of Commerce wishes we could get a doctor to serve on such and such a committee." The reply should be instant: "Just call Dr. Smith, president of the county medical society, and he will be glad to appoint a representative." A little thought along these lines will convince each of you that there is scarcely a civic activity in any one of your communities where the advice and counsel of a county medical society representative would not be more than welcome.

Before leaving the thought of inspiring the county medical society toward a more active part in general civic affairs, I want to emphasize liaison with lay organizations by putting a number of specific questions:

Does your county society meet at least once a year jointly with the local dental society? Does it meet annually with the local bar association? Does it invite the nurses' association to designate a speaker for a medical society program at least annually? Does it likewise invite the pharmacal association, the hospital association, and the veterinary medical association to send a speaker? Do your county society officers begin their annual terms of office by consulting with executives of the local American Legion, Junior Chamber of Commerce, School Board, Public Health Association, etc., just to talk things over and see what the year is likely

to bring forth? Formal interchanges are not always best; frequently more good can be done by two presidents and two secretaries across a luncheon table than by a joint meeting of two large organizations.

But unless your county society does all of these things, with the necessary variations to suit local conditions, it is missing a wonderful opportunity to extend its influence.

Similarly we may ask: Does your state association invite each of the associations representing a profession allied to medicine to appoint a fraternal delegate to the Annual Session? Does it ask each such association occasionally to appoint a guest speaker to appear on your Annual Session program? Does it always invite each such association to present a scientific exhibit at the Annual Session? Finally, I cannot close the subject of medical public relations without touching upon scientific standards. A very wise doctor once said to me: "If *all* doctors were *good* doctors, there wouldn't be any problems of medical economics or state medicine." That of course would be Utopian, but the moral is clear, and it is important to remember in thinking of public relations. It should be part of every county society's public relations program to accept and shoulder the moral responsibility for the standards of medical practice within its jurisdiction. If a county medical society expects public confidence and respect, and the privileges of leadership, it must be sure that its own house is kept clean; it must see that any form of charlatanism is fearlessly exposed. As nearly as it is humanly possible, the society must keep all its membership up to modern standards, and it must occasionally let the public know its membership roster. Otherwise, as too often in the past, medical societies and the whole profession are blamed for the acts of quacks and cultists who find some means of tacking "Dr." in front of their names.

State and national officers can and should advise and lead, state and national houses of delegates can and should establish general policies, but just as it is in every other department of organized medical activitiy, so it is in public relations: the county society is the basic unit of medical organization. And though state and national policies may guide, local conditions occasionally make variations, even reversed policies, necessary. County society officers need therefore always to bear in mind that whatever is good for the public in that community is good for the medical profession; and whatever is bad for the general public is bound to be bad for the profession. It is axiomatic that a doctor is first of all a citizen of his community; it follows then that a medical society is first of all a civic organization.

Applications For Fellowship Are Due December 15

Applications for the Lewis Cass Ledyard, Jr. Fellowship for the academic year 1941-42 should be in the hands of the Committee by the 15th of December, The Journal has been advised.

The Lewis Cass Ledyard, Jr., Fellowship was established in 1939 by a gift from Mrs. Ruth E. Ledyard, wife of the late Lewis Cass Ledyard, Jr., a Governor of The New York Hospital. The income, amounting to approximately $4,000.00 annually, will be awarded to an investigator in the fields of medicine and surgery, or in any closely related field. This amount will be applied as follows: $3,000.00 as a stipend and approximately $1,000.00 for supplies or expenses of the research.

In making the award, preference will be given to younger applicants who are graduates in medicine, and who have demonstrated fitness to carry on original research of high order. The recipient of this Fellowship will be required to submit reports of his work under the Fellowship, either at stated intervals or at the end of the academic year; and when the result of his work is published he will be expected to give proper credit to the Lewis Cass Ledyard, Jr. Fellowship.

The research work under this Fellowship is to be carried on at The New York Hospital and Cornell University Medical College. The Fellowship will be available on July 1st at the beginning of the academic year. It is expected that the award will be made by March 15, 1941.

Application for this Fellowship should be addressed to The Committee of the Lewis Cass Ledyard, Jr. Fellowship, The Society of The New York Hospital, 525 East 68th Street, New York, N. Y.

A. A. U. W. Offers Fellowship In Public Health To Women

Announcement has been received by The Journal of the Mary Pemberton Nourse Memorial Fellowship in Public Health, of the value of $1,250, to be awarded by the American Association of University Women for the academic year 1941-1942. Applications for the fellowship are due on December 15, 1940.

Women applying for the fellowship must possess a bachelor's degree or its equivalent. They must also have completed a minimum of either two years of graduate study tending toward public health work (for instance, in such subjects as biology, chemistry, the medical sciences, economics, sociology), or two years of practical work in the field of public health.

Preference will be given to those candidates who have completed two years of residence work for the doctorate or who have already received the degree.

The fellowship may be used for any work along the lines of public health work which shall be approved by the committee. The following three types of work indicate the directions in which it may be used:

1. Extensive study of public health problems and practice abroad or in the United States.

2. Intensive study of special problems relating to public health work.

3. Study of the science of public health.

In the letter of application required of all candidates the applicant for this fellowship must explain fully her conception of public health work. A personal conference between the candidate and a member of the committee will be arranged wherever it is possible.

Correspondence concerning directions for applying for the fellowship, the conditions of acceptance, etc., should be addressed to: Secretary, Committee on Fellowship Awards, American Association of University Women, 1624 I Street, N.W., Washington, D. C.

EDITORIALS

THE OLD, OLD STORY

There is one letter that most of us accept as a tradition of Christmas. It is the letter that brings us our Christmas Seals. Year after year, we receive that letter. We send our money. We do this because we know that something worthwhile is being done with our money.

Few of us, though, take an active interest in how our money is spent to combat one of our most dreadful enemies — tuberculosis. The horror of tuberculosis is fading gradually. That is enough for most of us. We read each year of the declining death rate. Perhaps, we even know the fact that the death rate from tuberculosis among people of all ages has been cut three-fourths since 1907, the first year of the Seal Sale.

We have forgotten the despair that once struck us whenever we heard the verdict — consumption. We know now that tuberculosis, if discovered in time, can be cured. We know that the X-ray can find early tuberculosis in time to cure it.

This year, as in other years recently, the tuberculosis associations are asking us to do one more thing in addition to giving our dollars. Their request is reasonable. Their having to make such a request is ironical. They are forced to ask us to drop our attitude of complacency toward tuberculosis. Great though the victories of the past are, tuberculosis is not under control in this country. It is our lives and our children's lives the tuberculosis associations are fighting for.

More persons between the ages of 15 and 45 are killed by tuberculosis than by any other disease. And these are the young, active, productive years of life.

Sixty-four thousand persons died of tuberculosis last year. That means that the disease killed 175 persons a day, or one person every eight minutes.

So the eradication of tuberculosis cannot yet be taken complacently. It can be eradicated. It will be eradicated—if we continue to regard the disease as a deadly enemy that can be forced out of this country through the combined efforts of scientists, medical men, health departments, tuberculosis associations and every single individual in this country.

We are fairly warned this year that if our own money must be used to fight our own indifference and complacency toward a deadly enemy of ours, as well as used to fight the enemy itself, complete victory will be delayed interminably.

We must restore meaning to Christmas Seals. We must consider them as the symbols of the financial power that is imperative to free ourselves and our children from a deadly scourge that, as yet, we have not conquered.

"LEST WE FORGET"

Approximately fifty years ago, two brothers were working under Osler at Hopkins. Thomas and John (Jack) McCrae had succeeded Barker and were destined to figure largely in the history of medicine and in the hearts of men.

Many years later John was with the McGill Unit in France. After Ypres and LaBassee he spent a few days with the Oslers at Oxford. Lady Osler writes about his tattered clothes, his worn body and his hatred of the Germans engendered by his experience at the front. After a needed rest she says: "We repacked him and sent him off." It was suggested that he may have had the lines of his immortal poem in his pocket at the time. "In Flanders Fields" shall never be forgotten. It reveals the tragedy and glory of the supreme sacrifice. He had thrown to us the torch with the admonition: "Be yours to hold it high."

Concerning the poem, McCrae's commanding officer, Major General E. W. B. Morrison, wrote: "This poem was literally born of fire and blood during the hottest phase of the second battle of Ypres. My headquarters were in a trench on the top bank of the Ypres Canal, and John had his dressing station in a hole dug in the foot of the bank. During periods in the battle, men who were shot actually rolled down the bank into his dressing station. Many times during the 16 days of battle he and I watched the chaplains burying their dead whenever there was a lull.

"Thus, the crosses, row on row, grew into a good-sized cemetery. . . . McCrae himself is buried near by, and, across the years, his grave, too, has become a place of meditation and prayer. On Armistice Day each year it is sprinkled with blood-red poppies from Flanders."

Hitler's irreverent hordes have mangled the poppies in Flanders Fields, but the sacred dust of heroes still inhabits the soil and

the spirit of the dead calling across the channel helps to keep alive the flickering torch of liberty. The medical profession of this hemisphere must be ready to follow his example if necessity demands.

After the war had robbed Osler of his only son, and a friendly pneumonia had relieved him of the responsibility of life and "a grief he could not throw off," Thomas McCrae was honored with the task of keeping his *Principles and Practice of Medicine* alive. In the fall of 1931, Dr. McCrae came as a guest of the Oklahoma City Clinical Society. In addition to his participation in the regular program, his clinic at the University Hospital was significant. Those who were present were impressed with his modest but authoritative presentation, his keen clinical perception, his level reasoning, his logical conclusions, and, finally, his delicate consideration for the comfort and feelings of charity patients.

It should be a matter of gratification and inspiration to the profession of Oklahoma to know that after his return to Philadelphia, he wrote: "It was a pleasure to see such an enthusiastic gathering and to meet a number of the men in your community. I was much impressed by the men whom I met. You evidently have splendid representatives of the profession."

In these dark days, the recollection of such courageous torch bearers may help us keep the faith.—L.J.M.

NEW OFFICERS

In December most County Medical Societies elect officers and collect the annual dues.

These are both important functions.

The election of officers is important as each officer has an important function, not only in the individual County Society but as an integral part of the State and National organizations. They should be physicians thoroughly sold on the necessity and value of medical organization and willing to give of their time and energy to develop a program of advancement along constructive lines. They should be outstanding members as it will be their duty to represent organized medicine in their respective communities.

As to the second feature, the payment of dues. This should be carried out by the individual member without solicitation by the secretary. Each member should be more interested in paying his dues than the officers are in collecting them. The County, State and National Associations are yours, they don't belong to the officers, and these organizations depend, for their influence, upon the individual members. Therefore, protect yourself and your profession by prompt fulfillment of your obligations.

Now to the secretaries. Be sure that a list of your officers, including delegates, is promptly submitted to the Executive Secretary. Be sure also to carefully fill out the membership sheets in remitting dues so that our headquarters may have complete name and proper address of each member when his dues are paid.

A. M. A. Trial Postponed Indefinitely

Referring to the trial of the American Medical Association and certain of its officials for alleged violation of the Sherman Anti-Trust Laws, scheduled to start in Washington, D. C., on October 21, The Journal of the Association in its October 26 issue says:

"According to an announcement issued in Washington on October 17 by United States Attorney Edward M. Curran, Justice James W. Morris, who is presiding in Criminal Court No. 2 of the District Court, disqualified himself from sitting on the case because of his former connection with the Justice Department as assistant attorney general. Justice F. Dickinson Letts, now presiding in Court No. 1, is in the middle of a first degree murder case and has a heavy assignment for the next few weeks. 'Since no third criminal court is available at the present time,' said United States Attorney Edward M. Curran, 'I have taken the case off the assignment and it will be set down for trial in the future on a date agreeable to both the government and the defense.'

"This postponement will release the officials of the Association, therefore, to a continuation of their work in the headquarters office and in other capacities so essential particularly at the present time."

Dermatologists Convene In Chicago In December

Over 600 dermatologists from all parts of the United States and Canada are expected to convene in Chicago for the third annual meeting of the American Academy of Dermatology and Syphilology at the Palmer House, December 8, 9, 10, and 11. There will be over 60 lectures on the program from Monday, December 9, through Wednesday, December 11. Sessions will be in the form of symposia, special lectures in courses of one to four hours each; numerous luncheon round table discussions, and clinical presentations at the University of Illinois Medical School in Chicago.

Guest speakers include Dr. Cyrus G. Sturgis, Professor of Medicine, University of Michigan, speaking on "Diseases of the Blood and Blood Forming Organs—Their Relation to the Skin and Mucous Membranes" (Monday morning); Dr. William F. Petersen, Professor of Pathology, University of Illinois, speaking on "The Patient, His Skin and the Weather" (Wednesday afternoon); and Dr. Elmer L. Sevringhaus, Professor of Medicine, University of Wisconsin, who speaks Tuesday afternoon on "Endocrines and Their Relation to Dermatology." The annual banquet is scheduled for Tuesday evening.

Actual cases of rare dermatoses and of other important skin diseases will be presented at the University of Illinois Medical School Monday afternoon, December 9, by a score of leading dermatologists from various parts of the country. These clinical presentations will be arranged so that visiting dermatologists and syphilologists can attend several different presentations during the afternoon. Discussion of rare dermatoses follows the meeting and will be resumed in the Palmer House that evening.

• THE PRESIDENT'S PAGE •

The First Annual Secretaries' Conference of the Oklahoma State Medical Association held in Oklahoma City October 27 can be considered a progressive endeavor formulated to allow the different county societies, through their secretaries, the opportunity of discussing their problems and profiting by their mutual experiences.

Sixty-three representatives from the majority of the counties of the state were present and took part in the proceedings.

The subjects on the program were well-prepared and well worth anyone's time. The program for the evening dinner, headlined by Holman Taylor, M.D., Secretary of the State Medical Association of Texas, and Mr. Harvey T. Sethman, Executive Secretary of the Colorado State Medical Society, was outstanding. The Conference also was fortunate in having the President of the American Medical Association, Dr. Nathan B. Van Etten, present.

To the secretaries who were unable to attend, it is my earnest hope that such will not be the case at the next meeting. Everyone will profit by 100 per cent attendance.

Henry H Turner

President.

ASSOCIATION ACTIVITIES

Clinical Society Convention Draws Record Attendance

The 1940 session of the Oklahoma City Clinical Society, which closed its four day program on October 31 at the Biltmore Hotel in Oklahoma City, was one of unusnal merit. Contribnting to this were several factors, including a distinguished speakers' roster of outstanding teachers, splendid cooperation from the Oklahoma City Chamber of Commerce and the Biltmore Hotel, an effective and efficient organization, and beautiful weather.

The total registration this year was larger than it has ever been before, bearing ont the established reputation of the meeting for steady and consistent growth. The registration figure stood at 840, an increase of 27 over the 1939 registration. Broken down, it was as follows:

Members	246
Associate Members	301
Guest Speakers	17
Honorary Members	2
Interns	57
Wives of Visiting Doctors	138
Exhibitors	79

Texas, Kansas, Arkausas and Colorado were well-represented at the meeting, and other states having representatives were California, Pennsylvania, Florida, Missouri, Wyoming, New Mexico and Arizona.

The meeting was saddened by the death of Dr. LeRoy Long, one of the early organizers of the society aud an outstanding member of the medical profession in the state.

Society members were elated that no injuries were suffered by Dr. Robert J. Crossen and Dr. Richard S. Weiss, two of the gnest speakers, in the train wreck that delayed their appearance on the program. An expression of gratitude was given by the officers for the splendid cooperation of the guest speakers who assisted in the emergency occasioned by the accident. They likewise were grateful to Dr. Adsou who substituted for Dr. Ernest Sachs.

Dates for next year's conference have not been definitely set, bnt members are looking forward to another highly successfnl meeting at that time.

Northeast Oklahoma Society Elects New Officers

Dr. Isadore Dyer of Tahleqnah was elected new president of the Northeast Oklahoma Medical Society, succeeding Dr. W. G. Chesnut of Miami, at the organization's meeting in Tahleqnah October 22. Dr. H. K. Riddle of Coweta was named vice-president, and Dr. W. Jackson Sayles of Miami was reelected secretary-treasurer.

On motion, the name of the association was changed from the Eighth Councilor District Clinical Society to the Northeast Oklahoma Medical Society. Henryetta was chosen as the meeting place for the next conclave, to be held in the latter part of Jannary.

Of great interest were the papers of the two guest speakers, Dr. A. N. Arneson and Dr. Brian Blades, both of St. Louis, and both members of the staff of Washington University's School of Medicine. Dr. Arueson gave an instructive paper on "Cervical and Corpus Uterine Carcinoma," and Dr. Blades spoke on "Bronchiectasis," with special reference to treatment by lobectomy.

First Secretaries' Conference Acclaimed A Success

Inangurating the First Annual Secretaries' Conference of the Oklahoma State Medical Association, over sixty county representatives assembled in Oklahoma City October 27. Dr. Holmau Taylor of Texas and Mr. Harvey Sethman of Colorado attended the Conference as gnest speakers and gave splendid addresses on "Cooperation Between County Medical Societies and the Executive Office," and "Modernizing Medical Public Relations," respectively. In addition to the two guest speakers, the Conference was honored by the attendance at the evening dinner of Dr. Nathan B. Van Etten, President of the American Medical Association.

The Conference, designed to bring about closer cooperation aud a more thorough understanding of mutual problems of the connty societies and the Executive Office of the Associatiou, was a distinct success, as exemplified by the action of the county secretaries iu adopting a resolution to make the organization permanent.

The secretaries also chose a permanent chairman for the Conference, electing Dr. Roy L. Smith of Tulsa to that office.

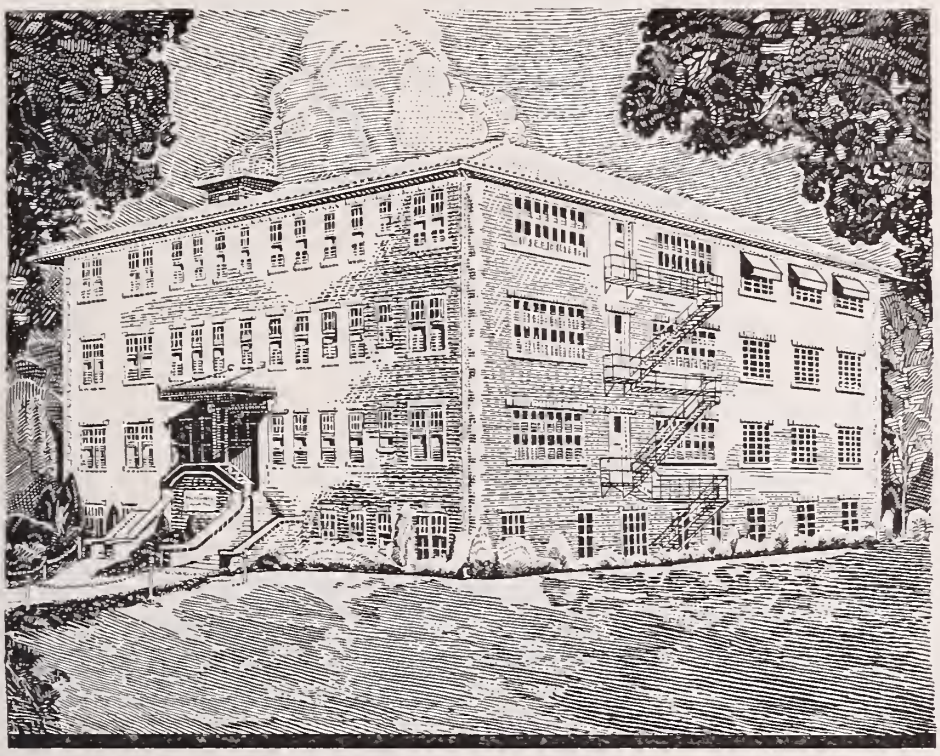
Dr. Smith, upon his election as chairman, appointed a Coustitution and By-Laws Committee composed of Dr. Shade D. Neely of Muskogee, chairman, Dr. W. W. Rucks, Jr., of Oklahoma City, Dr. John R. Walker of Enid, and Dr. John R. Callaway of Pauls Valley. The Conference also voted to snbmit the Constitution and By-Laws to the Council for approval before they are adopted at the uext meeting.

The afternoon meeting began promptly at one o'clock and followed the annonnced program. Dr. Tom Lowry, President of the Oklahoma County Medical Association, welcomed the secretaries to Oklahoma City and, after Dr. Turner, President of the Associatiou, reported on the affairs of the Association, the Conference took up the discussion of county society problems.

Dr. John R. Walker of Garfield County discussed membership and the attendant responsibilities of the secretary aud each member. Dr. J. V. Athey of Washington-Nowata County pointed out the advisability of well-rounded, carefully planned medical programs. It was interesting to learn that since before 1914 the Washington County Society, and lately the Washington-Nowata Society, has had printed programs for the entire year, thns allowing each member the opportunity to review the program and also giving each member who is scheduled to present a paper adequate time to prepare his subject. Dr. Donald Angus of Comanche County talked on the Farm Security Administration Medical Plan and, from the general discussion following Dr. Angus' paper, this problem was one of the most prevalent among the county societies.

Mr. Walter R. McBee, Director of Group Hospital Service, gave a report on the activities of Group Hospital Service and the work it is attempting to do in the state in providing hospitalization for the public on a basis everyone can afford to pay. Dr. Turner outlined the progress of the Medical Preparedness Committee of the Association and again stressed the necessity for every doctor in Oklahoma, whether actively practicing or not, to fill out and retnrn the A. M. A. Qustionnaire.

At this point in the program, through the courtesy of the Borden Milk Company, refreshments were served the Conference. Following the intermission, Dr. L. D. Hudson of Dewey and Dr. Harper Wright of Oklahoma



Etching from a pen study of Polyclinic by Edward Henderson

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THIRTEENTH and ROBINSON OKLAHOMA CITY

City discussed State Question No. 241, the Initiative Petition to amend the Medical Practice Act, and the necessity for each and every member of a county medical society to do his or her part in properly explaining the contents of the measure to their friends in order that they might know the extent to which this measure would affect the health and welfare of the people of Oklahoma.

Mr. Hugh Payne of the State Health Department then read a paper on County Health Units, and Mr. Mott Keys of the State Insurance Fund gave a discussion on the work of the Fund, how it affected the doctors of the state, and the efforts that were being made to improve the facilities of the Fund. Miss Lorraine Ketchum of the Oklahoma Public Welfare Department discussed the work of this department and its relation to the medical profession. Dr. L. S. Willour, Editor of The Journal, followed Miss Ketchum with a report on The Journal of the Association, and Mr. Graham, the Executive Secretary, discussed the business transactions between the county societies and the Association's office.

Following the presentation of the prepared program, a general discussion period was held, and Dr. Johnny A. Blue, Secretary of the Texas County Society, pointed out and discussed the problems of the small county societies in arranging programs that would interest the members. This question seemed to affect many of the societies in the state and, because of its seriousness, and on motion of Dr. Paul Hemphill of Osage County, it was voted to make the matter of programs for the smaller county societies the first order of business at the next meeting. It was also suggested that the Conference study the advisability of the State Association establishing a speakers' bureau for the purpose of providing interesting speakers well-versed in their subjects for scientific talks on county society programs.

The evening banquet and program was, in the opinion of everyone present, one of the finest ever presented in Oklahoma. Both Dr. Holman Taylor and Mr. Harvey T. Sethman are outstanding state secretaries, and their discussions of their subjects were masterpieces.* The Association was indeed fortunate in having two such outstanding men to inaugurate the proposal of having an Annual Secretaries' Conference. It is hoped that at the next meeting of the secretaries, there will be one hundred per cent attendance.

*Mr. Sethman's paper is published in this issue of The Journal, and appears on page 16. Everyone should read this timely discussion of a pertinent topic.

Vitamin Advertising and Mead Johnson's Policy

The present spectacle of vitamin advertising running riot in newspapers and magazines and via radio emphasizes the importance of the physician as a controlling agent in the use of vitamin products.

Mead Johnson and Company feel that vitamin therapy, like infant feeding, should be in the hands of the medical profession, and consequently refrain from exploiting vitamins to the public.

Speaking on "The Use of Sex Hormones in the Male," Dr. Henry H. Turner, President of the Association, made a guest appearance before the Dallas Academy of Medicine in Dallas on October 14.

NEW BOOKS

MODERN DERMATOLOGY AND SYPHILOLOGY, By William Becker, M.D., Associate Professor of Dermatology and Syphilology, Kuppenheimer Foundation, University of Chicago; and Maximillian E. Obermayer, M.D., Assistant Professor of Dermatology and Syphilology, Kuppenheimer Foundation, University of Chicago. J. P. Lippincott Company, Philadelphia.

This textbook is one of the best this reviewer has had the pleasure to read, because it fulfills the authors' objective as mentioned in their preface, that "a textbook should present primarily the ideas and methods of the author, and secondarily those of other workers." Each group of skin lesions is presented in the same lecture type style as given by the authors to their students—orientation, etilogy, characteristic lesions, histopathology, and treatment.

The treatment of the various skin lesions in each case is clear, concise, and unusually simplified, which should appeal to most physicians. Calamine lotion and potassium permanganate, for example, are recommended repeatedly without apology for the simplicity of treatment. The authors do not confuse the reader by listing numerous prescriptions or procedures used by others. The rare skin lesions are given but little space, because of the authors' desire to make this book practical.

The functional aspect of many skin lesions is stressed in this book. This approach to the etiology and therefore treatment of many of the common dermatosis is one of the reasons why this textbook can be called modern.

Syphilology in all its multiple phases is presented in the same clear concise fashion as other skin lesions. About one-fourth of the book is devoted to this subject. An excellent outline or chart for treatment is present for quick reference.

Army Medical Library Asks For Reprints

The Journal has been advised by the Army Medical Library, Washington, D. C., that authors' reprints are gratefully received at the Library. They are placed in a special collection catalogued by author and thus form a ready bibliography of the work of any given writer and a valuable supplementary source of material when the volume of original publication is temporarily unavailable at the bindery or on loan.

Dr. Earl McBride of Oklahoma City recently announced his resignation as medical advisor to the State Insurance Fund. Dr. McBride had held this position for several months.

Appointment of three new county health superintendents, effective October 25, has been announced by Dr. G. F. Mathews, Commissioner of the State Health Department. They are: Pontotoc County, Dr. W. R. Cheatwood, Ada; Caddo County: Dr. Lowell L. Stokes, Anadarko; Ottawa County: Dr. A. R. Hughes, Miami (acting).

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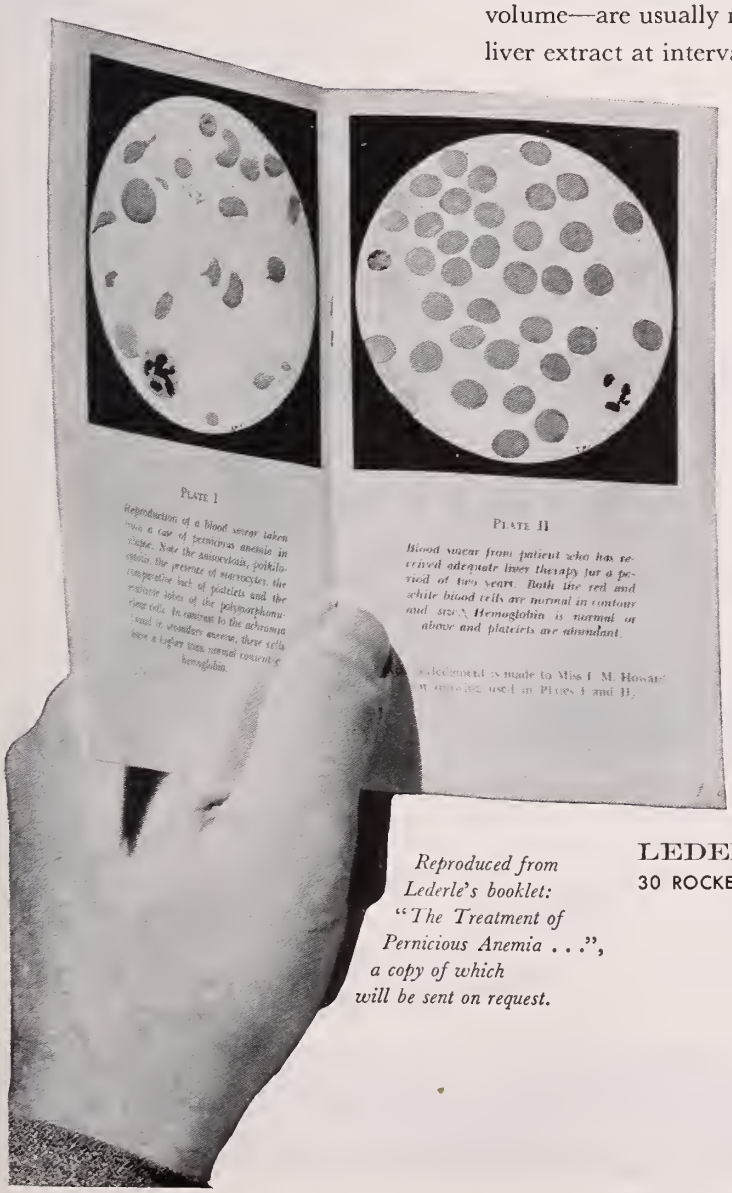
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The Registry For Clinical Laboratory Technologists

(Editor's Note: In order that the medical profession of Oklahoma may know the extent to which laboratory technicians are attempting to qualify those entering the field, the following discussion on "The Registry for Clinical Laboratory Technologists" is published.)

In 1928 the American Society of Clinical Pathologists established a registry to pass on the qualifications of laboratory technicians and to approve schools for training these workers. Soon this Registry received the recognition of the American Medical Association, the American College of Surgeons, the American Hospital Association, the Catholic Hospital Association and other scientific and medical organizations. The Council on Medical Education and Hospitals of the American Medical Association was authorized to formulate standards and approve schools which meet its requirements. Briefly the requirements for a training school for medical technologists as approved by the Council, are as follows:

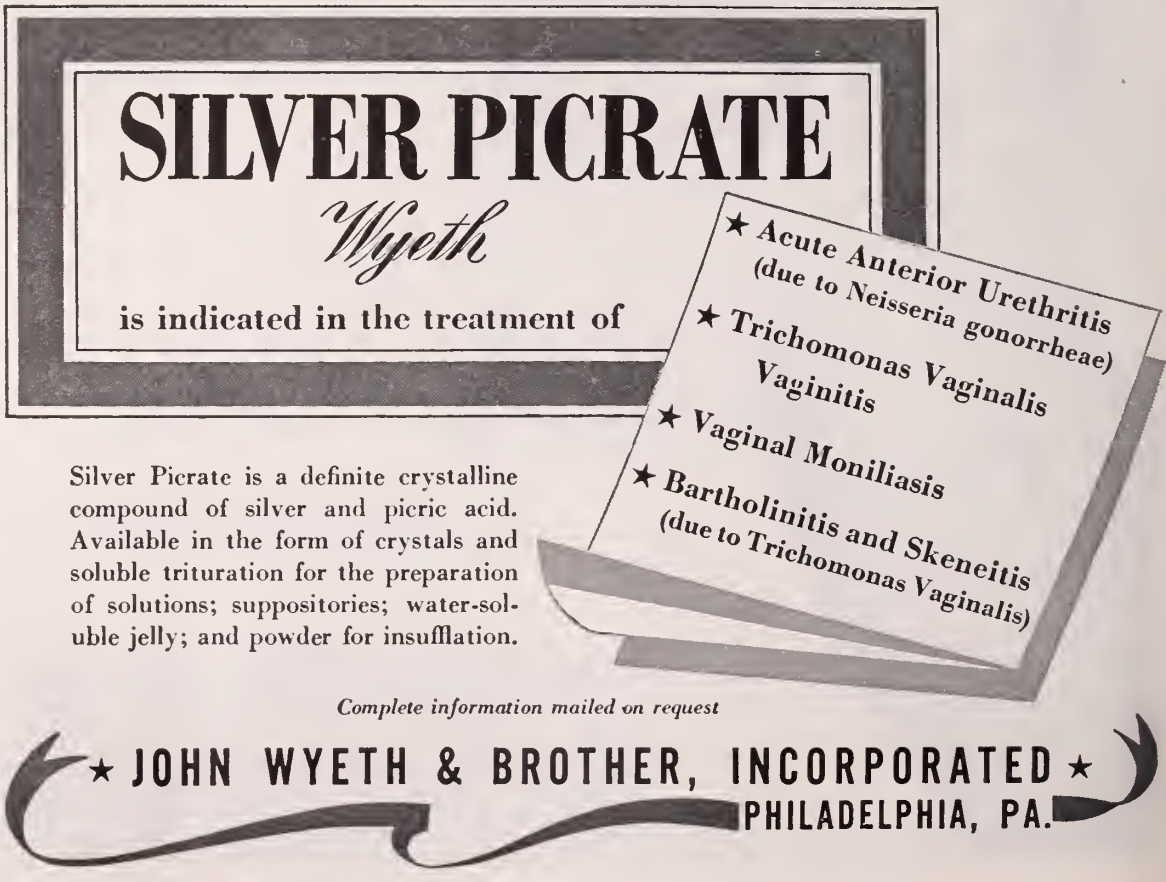
1. The director must be a graduate in medicine and a clinical pathologist or pathologist of recognized standing. He shall be responsible for the actual conduct of the training course and be in daily attendance for a sufficient time to supervise the work and teaching.
2. The technical assistauts who comprise the teaching staff shall be those who specialized in various branches of laboratory science or registered technologists capable of teaching demonstrating and guiding the work of the student.
3. The yearly enrollment shall not exceed more than one student to each member of the teaching staff.
4. The hospital in which the teaching is conducted shall have a bed capacity of not less than 100 patients and an average daily occupancy of 75 or more patients.

(In addition to the hospitals approved for training, laboratories who have a doctor who is a clinical pathologist as director may take one student for each registered technologist that he employs as an apprentice *without pay* for a twelve-month training period).

5. The hospital or other laboratory approved for the training of technologists shall not allow any "students," "volunteer workers," or so-called "Technician Interns," to serve in the laboratory as substitutes for salaried qualified workers in return for obtaining training and experience in laboratory technique.
6. Commercial advertising is considered unethical.

The student himself who applies for training must have a minimum of 60 college hours which must include courses in chemistry, biology and physics. Many hospitals and laboratories require a degree in biology or chemistry before admitting a student. After the student completes his twelve-month course in the hospital or medical laboratory, he must take a thorough test which is conducted by the Board of Registry of the American Society of Clinical Pathologists. Successful applicants after passing the national examination are designated as Medical Technologists and are allowed to use the designation M.T. after their name, a title which connotes a holder of a certificate of competence from the Registry nationally recognized in hospital and medical spheres.

Within the past six months one C. A. Bartholemew of Red Bank, New Jersey, who has never himself been registered, began to circularize the medical laboratory workers of the country asking them for a fee of five dollars to join the "American Medical Technologists" and offering to bestow the title of M.T. by virtue of a charter from the State of New Jersey. As far as we know, this movement is not authorized or sponsored by any medical or scientific group. The promoters seem, moreover, to have undertaken the task of passing on the competence of training schools for medical technologists. In this they seem to be abetted by the proprietors of some commercial schools which have not themselves been approved by the Council on Medical Education and Hos-



The Effectiveness of AMNIOTIN



IN RELIEVING MENOPAUSAL SYMPTOMS IS AN ESTABLISHED FACT

ELEVEN years ago Sevringhaus and Evans[1] reported that Amniotin was "of marked value in the relief of the vasomotor phenomena of the menopause." This observation has been confirmed by so many published clinical papers that the effectiveness of Amniotin in relieving distressing menopausal symptoms is widely recognized.

For example, Novak[2] in a paper on the management of the menopause states: "The fact remains, however, that a certain proportion of women suffer with severe vasomotor symptoms for a variable and unpredictable time, and that the lot of these women can be made much easier by intelligent organotherapy. Whereas formerly there was much difference of opinion among clinicians as to the efficacy of hormone treatment, opinion is now unanimous that it is of genuine value. In fact, organotherapy for menopausal symptoms is looked upon as one of the more satisfactory applications of endocrine knowledge in the field of gynecological practice."

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Schneider[3] citing experience in 519 cases writes: "... the ease with which complete relief can be obtained in the early cases, has been one of the most striking observations. . . ." The milder forms of disturbance often can be controlled by the oral administration of Amniotin in capsules. Larger doses may be administered advantageously by the hypodermic route.

Amniotin is a highly purified preparation of naturally occurring estrogenic substances. It is available in Capsules containing 1000, 2000 and 4000 I. U., Pessaries of 1000 and 2000 I. U., and in 1-cc. ampuls containing 2000, 5000, 10,000 and 20,000 I. U.

[1] Sevringhaus, E. L., and Evans, J. S.: *Am. J. M. Sc.* 178:638, Nov. 1929.
[2] Novak, Emil: *Surg. Gynec. & Obst.* 70:124, Jan. 1940.
[3] Schneider, P. F.: *Am. J. Obst. & Gyn.* 37:861, May 1939.

For literature address the Professional Service Department
E. R. Squibb & Sons, 745 Fifth Avenue, New York, N. Y.

Amniotin A SQUIBB PREPARATION OF ESTROGENIC SUBSTANCES OBTAINED FROM THE URINE OF PREGNANT MARES

pitals and the Board of Registry of the American Society of Clinical Pathologists. This would seem to be the old technic of having one soiled hand washing the other. Graduates from these unapproved schools who are ineligible for the Registry's examination seem to be welcomed into the "American Medical Technologists." It is unfortunate that the national organization of medical technologists who are approved by the American Medical Association are incorporated under the name, "American Society of Medical Technologists," (note the similarity in names).

Complaints have come to both the Council and the Registry as well as to the local group, the Oklahoma Society of Medical Technologists, against the efforts of this unauthorized and irresponsible body to undermine the scientific and ethical standards that have been set up for the practice of this important vocation by the American Medical Association and the American Society of Clinical Pathologists.

The Oklahoma Society of Medical Technologists therefore is requesting the cooperation of the doctors of this state to examine the qualifications of the laboratory workers they employ and to aid us in informing young men and women who contemplate a career in Medical Technology of the hazard that lies in participation in such courses or organizations. Information about the Board of Registry may be obtained from Mrs. Anna R. Scott, Registrar, 234 Metropolitan Building, Denver, Colorado, or from the Secretary of the Oklahoma Society of Medical Technologists, Miss Mary Alexander, Morningside Hospital, Tulsa.

The following young men and women are registered and in good standing* with the Board of Registry and are serving the medical profession in Oklahoma. This list is correct as of July 1, 1940.

*A member is not in good standing unless his or her certificate bears the imprint of the current year.

Alleene Abernathy, Oklahoma City; Kathryn Fae Aderhold, Oklahoma City; Mary Alexander, Tulsa; Elizabeth Lucille Beauchamp, Stillwater; Clara Becton, Tulsa; Elsie Berousek, Oklahoma City; Elizabeth Brake, Stillwater; Sister M. Theresa Bransiepie, Oklahoma City; Dora Ellen Browning, Tulsa; Vivian Drum Burch, Ardmore; Berniece Eva Bynum, Oklahoma City; Mary Camille Carey, Oklahoma City; Edna A. Caulfield, Tulsa; Marie Alice Clark, Oklahoma City; Alma Sherman Cleveland, Oklahoma City; Forrest Cross, Guthrie.

Walter J. Dell, McAlester; Hattie Mae Doughty, Bartlesville; Elizabeth Earlougher, Shawnee; Narion Eaton, Ada; Marie Bratton Fields, Ada; Ruth Fletcher, Talihina; Doris F. Franz, Ardmore; Mildred L. Flynn, Oklahoma City; Virginia Gant, Oklahoma City; Raymond J. Gough, Tulsa; Carl Grounds, Fort Sill; Amy Lee Ellen Harris, Oklahoma City; Marguirite O. Hancock, El Reno; Sister M. Gratiana Hirt, Tulsa; Bernice Mable Hodges, Oklahoma City; Ruth V. Holm, Oklahoma City; Katheryn Stout Hutcherson, Oklahoma City.

Rowena Johnson, Tulsa; Vernal E. Johnson, Oklahoma City; Sister M. Florina Johnston, Ponca City; Lyell Joseph Klotz, Weatherford; Anna King, Muskogee; Genevieve A. Lake, Enid; Camille C. Lane, Oklahoma City; Thomas McMullen, Oklahoma City; Dorothy M. Maynard, Muskogee; Jesse Meador, Muskogee; Emily F. Moore, Talihina; Ruby Iehl Nansen, Woodward; Jean Patterson Nisbet, Okmulgee; Elizabeth Parks, Norman; Peggy Ann Pratt, Oklahoma City; Sister M. Ludovica Riedal, Tulsa; Jewell Hazel Ross, Oklahoma City.

Anne Sandoz, El Paso, Texas; Sister M. Regina Schumann, Oklahoma City; Paul C. Sevedge, Tuskahoma; Velma Gene Sewell, Jacksboro, Texas; Flo Rita Shepard, Oklahoma City; Mary Sherry, Oklahoma City; Eleanor Lee Shook, Wewoka; Zana Gabrielle Skidmore, Tulsa; James Bradley Smith, Oklahoma City; Homer L. Spencer, Tulsa; Mary Helen Spickard, Tulsa; Edgar Ebeneezer Taylor, Duncan; Pauline Carey Tilford, Norman; Charlaine Tullis, Norman.

Dale Van Vacter, Dallas, Texas; Margaret Von Behren, Muskogee; Mildred Wall, Oklahoma City; Lucille Brown Wallace, Oklahoma City; Margaret E. Wasson, Oklahoma City; Lois Armstrong Wedge, Pawhuska; Frank Nelson Willey, Tulsa; Elbert Vance Winningham, Oklahoma City; Leila Woodworth, Tulsa; Allethia Averett Word, Bartlesville; Ellen Cecilia Wright, Oklahoma City; Sterline Elizabeth Wright, Oklahoma City.

Composing the State Advisory Board are Dr. W. F. Keller, Oklahoma City; Dr. William H. Bailey, Oklahoma City; and Dr. I. A. Nelson, Tulsa.



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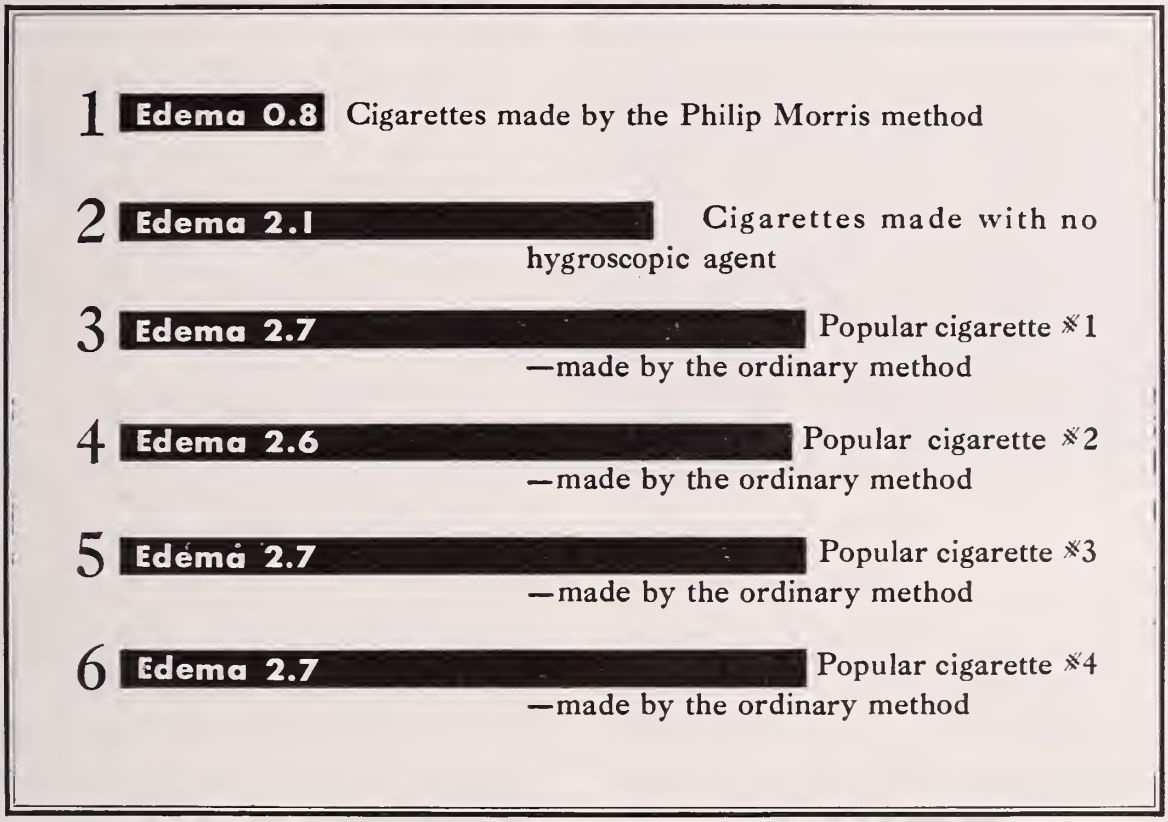
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How irritation varies— from different cigarettes

Tests made on rabbits' eyes reveal the influence of hygroscopic agents*



CONCLUSION:* Results show that regardless of blend of tobacco, flavoring materials, or method of manufacture, the irritation produced by all ordinary cigarettes is substantially the same, and measurably greater than that caused by Philip Morris.

CLINICAL CONFIRMATION:** When *smokers* changed to Philip Morris, every case of irritation of the nose and throat due to smoking cleared completely or definitely improved.

* * *

**N Y. State Journ. Med. 35 No 11,590. **Laryngoscope 1935, XLV, No. 2, 149-154*

MEDICAL PREPAREDNESS

Subcommittees Are Appointed To Assist Coordinating Group

Announcement of subcommittees on medical education, hospitals, industrial medicine, dentistry, nursing and Negro health, has been made by the Health and Medical Committee of the Council of National Defense. The general committee, headed by Dr. Irvin Abell of Louisville, Ky., former President of the American Medical Association, was appointed by President Roosevelt on September 19 to survey and coordinate the medical resources of the country in the interests of national defense.

Announcement of the subcommittees was made by Dr. Abell from his office at the Public Health Service Administration Building in Washington. Dr. C. Sidney Burwell, dean of the Harvard Medical School, Boston, was named chairman of the subcommittee on medical education. Other members of this group are Dr. L. R. Chandler, Stanford University Hospital, San Francisco; Dr. Harold S. Diehl, dean of the University of Minnesota Medical School; Dr. Willard C. Rappleye, commissioner of hospitals of the city of New York; and Dr. John H. Musser of the Tulane University of Louisiana School of Medicine, New Orleans.

Subcommittee on hospitals: Dr. Winford H. Smith, director of Johns Hopkins Hospital, Baltimore, chairman; Rev. Alphonse M. Schwitalla, president of the Catholic Hospital Association of United States and Canada, St. Louis; Dr. Malcolm T. MacEachern, associate director of the American College of Surgeons, Chicago; Dr. Claude W. Munger, chairman of the defense committee of the American Hospital Association, New York; and Dr. Nathaniel W. Faxon, superintendent of the Massachusetts General Hospital, Boston.

Subcommittee on industrial medicine: Dr. Clarence D. Selby, medical consultant of General Motors Corporation, Detroit, chairman; Prof. Philip Drinker, Harvard School of Public Health, Boston; Dr. E. C. Holmblad, Chicago; Dr. George M. Smith, Yale University Medical School, New Haven, Conn.; Dr. Lloyd Noland, chief surgeon, Tennessee Coal, Iron and Railroad Company, Fairfield, Ala.; Mr. William P. Yant, Mine Safety Appliance Company, Pittsburgh; and Dr. A. J. Lanza of the Metropolitan Life Insurance Company, New York.

Subcommittee on dentistry: Dr. C. Willard Camalier, Washington, D. C., former president of the American Dental Association, chairman; Dr. John T. O'Rourke, dean of the University of Louisville School of Dentistry; Dr. Leroy M. S. Miner, dean of the Harvard University Dental School, Boston; Dr. Frederick B. Noyes of Chicago; and Dr. Guy S. Millbury of San Francisco, former dean of the Dental School of the University of California.

Miss Mary Beard, director of nursing of the American Red Cross, was named chairman of a subcommittee on nursing; and Dr. M. S. Bousfield of the Julius Rosenwald Fund, Chicago, will head a subcommittee on Negro health.

In announcing these subcommittees, Dr. Abell stated that these subcommittees would assist the Defense Council's Medical Committee in coordinating health and medical activities and in "mobilizing the medical resources of the nation for national defense."

Other members of the Health and Medical Committee on national defense as appointed by the President and the National Defense Council are Major General James C. Magee, Surgeon General of the Army; Rear Admiral Ross T. McIntyre, Surgeon General of the Navy; Dr. Thomas Parran, Surgeon General of the United States Public Health Service; and Dr. Lewis H. Weed, chairman of the Division of Medical Sciences of the National Research Council.

A. M. A. Questionnaire Returns From Oklahoma Reported

Information has been received from the Medical Preparedness Committee of the American Medical Association of the names of the doctors in Oklahoma who, as of November 1, had not returned the Medical Preparedness Questionnaire.

According to this recapitulation, five hundred and sixty-four doctors in Oklahoma have failed to make a return. For the most part, those failing to make a return are retired or already in the army.

All county representatives of the State Medical Association's Medical Preparedness Committee are being advised by letter as to the doctors in their county who have not returned the questionnaires, and should your county representatives contact you in this respect, and you are of the opinion you have returned one, cooperate with him by filling out another, as for some reason your first return has not been received at A. M. A.

Every licensed doctor of medicine, irrespective of whether he is actively practicing, should fill out and return a questionnaire, as there may be some place in the preparedness program where he can be of service.

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STUDIES IN THE AVITAMINOSES



This page is the eleventh of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the November 9 issue of The Journal of the American Medical Association.

The Gingival Manifestations of Vitamin C Deficiency



Gingival lesions are said to be among the most frequent anatomic changes occurring in scurvy. They occur only after dentition has taken place, and are most severe when the teeth are deformed or broken. The pathologic process begins as a hyperemia which is rapidly followed by destruction of the epithelium, and ulceration. Even in the early stages bleeding is readily produced by slight trauma; hemorrhages, while they do not lead to a great loss of blood, may be prolonged and difficult to control. The gum necrosis is usually accompanied by dental porosity. In the advanced stages of scurvy, the teeth are loosened due to destruction of the alveolar process, and the ulcerative lesions may extend to the mucous membrane of the cheeks and tongue. Gangrene has been described as a sequel of advanced untreated scurvy.

UPJOHN

MINUTES

Oklahoma State Medical Association

COUNCIL MEETING

July 12, 1940

The meeting was called to order at the Oklahoma City Association headquarters, 210 Plaza Court, with President Henry Turner presiding. All members were present except Councilor Tisdal, who was ill.

On motion, it was seconded that the minutes of the last meeting be dispensed with.

Dr. Fulton made a motion that Dr. Willour receive a refund of the $288.75 of the money that was deposited by him following the annual audit, as he did not believe Dr. Willour was responsible for this amount. This motion was seconded by Dr. Kuyrkendall. It was voted and defeated 5 to 6.

Mr. West of the Group Hospital Insurance was presented and made a few remarks.

A financial report was then presented by Dr. Willour showing that on the sale of bonds the Council received a profit of $354.00.

A motion by Dr. Ewing that the officers of the Council, the President and the Secretary-Treasurer be authorized to use their best judgment in making investments for the Society to the amount of $6,000.00, $4,897.24 to be taken from the Medical Defense Fund and $1,102.76 to be taken from the Membership Fund was seconded by Dr. Willour and carried.

Dr. Willour then informed the Council that the funds of the Association had been deposited in the Liberty National Bank, Oklahoma City.

The following motion was made by Dr. Willour and seconded by Dr. Risser, and carried:

> "That all accounts of the Journal of the Oklahoma State Medical Association, which have, of necessity, because of non-paymeut of the account, been deleted from the Journal, have the necessary steps taken for the collection of same."

The question of payment of expenses of delegates to the American Medical Association was then discussed and the ruling of our attorney's opinion was read by the President.

Motiou by Dr. McNeill and seconded by Dr. Osborn that the account for Dr. Cook's expense to the A. M. A. be deferred until the next meeting of the House of Delegates. The motion carried.

The treasury was then ordered to pay the expense of Dr. Howard and Dr. Rogers.

Then the Council proceeded to discuss the details of the Board of Editors. Dr. Moorman was named as the member for the one-year term, Dr. Ned Smith for the two-year term, and Dr. Willour for the three-year term. Dr. Moorman's term had expired, and by motion of Dr. Willour and seconded by Dr. Kuyrkendall he was re-elected for a three-year period.

On motion of Dr. McNeill, seconded by Dr. Turner, the following resolution was made and adopted:

> "That hereafter the Council shall meet in regular QUARTERLY meetings, if in the judgment of the President of the Association such meeting shall be considered necessary."

The Council was then asked to suggest the name of some person to act as the Oklahoma Member of the Medical Preparedness Committee. The name of Dr. Willour was presented by Dr. Kuyrkendall. Dr. Turner's name was presented by Dr. McNeill and that of Dr. Horace Reed by Dr. Turner. Dr. Willour requested that his name be withdrawn and on motion of Dr. Ewing, seconded by Dr. Neely, the name of Dr. Turner was recommended to the Council as our member of the Medical Preparedness Committee.

On motion of Dr. Osboru and seconded by Dr. Risser and unanimously carried the Council of the Association would be governed in parliamentary procedure according to Roberts Rules of Order.

Having disposed of all the business at hand, the Council adjourned.

L. S. Willour, Secretary.

MINUTES

COUNCIL MEETING

September 29, 1940

All members of the Council, with the exception of Dr. Templin, Alva, and Dr. Kuyrkendall, McAlester, were present. Dr. Turner presiding.

Motion of Dr. Stevenson and seconded by Dr. Risser that the reading of the minutes of the preceding meetiug be dispensed with.

On motion of Dr. McNeill aud seconded by Dr. Osborn, unanimously carried, newly acquired bonds of the Association are to be registered.

On motion of Dr. McNeill seconded by Dr. Osborn, Mr. Mott Keys was asked to appear before the Council. This he did and presented a few ideas of the State Insurance Fund.

Dr. McBride and Dr. W. K. West were also presented to the Council to discuss this matter and after considerable deliberation, the following motion was presented by Dr. Risser:

> "I move that it be the sense of the Council here assembled that at the request of the Insurance Board that a committee of five men be appointed to counsel with the State Insurance Fund. We further respectfully suggest that, in our judgment, the work of the Insurance Board will be greatly expedited by the employment of an experienced Adjuster to work with this Committee. This recommendation is contingent on the employment of an experienced Adjuster."

This motion was seconded by Dr. Willour and carried.

Dr. Turner next brought up the matter of expense connected with the Medical Preparedness activity and the following motion was made by Dr. Osborn:

> "I move that we allow the money already expended in carrying on this work and that at least $200.00 be allowed to complete the work of sending these questionnaires to non-members as well as members."

Seconded by Dr. Risser and carried.

Mr. Graham then discussed the matter of initiative petition and the following motion was offered by Dr. Walker:

> "That a committee of three be appointed to confer with the State Chamber of Commerce officers regarding certain requests, and if found advisable, that we join with them in their activities up to and including a donation of $500.00."

Seconded: Dr. McNeill and carried.

The motion was then presented by Dr. Osborn that the Executive Secretary be instructed to print sufficient copies of the new Constitution and By-Laws to furnish each member of the State Medical Associatiou with a copy. This was seconded by Dr. Risser and carried.

Dr. Turner then brought up the situation concerning graduates from unapproved medical schools being eligible for commission in either the active or reserve medical corps, as per a resolution in the House of Representatives in Congress and asked for the opinion of the Council.

Dr. McNeill made the motion that the President of the Association write a letter to each of the Senators and Representatives with the sanction of the Oklahoma State Medical Association urging defeat of the measure. This was seconded by Dr. Osborn and carried.

The next order of business was the proposed Anuual Secretaries' meeting. There was considerable discussion as to the meeting of the expense.

The motion by Dr. Neely "That the Council approves paying for the dinner of the Secretaries at the annual Secretaries' Conference," was seconded by Dr. Osborn and carried.

Motion by Dr. Tisdal "That the date of the First Annual Secretaries' Conference be set for the day before the Oklahoma Clinical Society Meeting." Seconded by Dr. Stevenson and carried.

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Dr. Stevenson presented the following resolution.

"I move that the Council record its approval of the Physicians and Surgeons Liability Insurance under the Oklahoma Group Policy issued by the Houston Fire and Casualty Insurance Company of Houston, Texas."

Seconded by Dr. Osborn and carried.

The following resolution was presented by Dr. Stevenson:

"The Editorial Board of the Journal of the Oklahoma State Medical Association is hereby requested to hold a meeting at the earliest convenient date, and before the next Council Meeting. The purpose of the meeting is to determine what disposition should be made of medical books and other publications which are the property of the Oklahoma State Medical Association, and also to formulate a policy concerning the distribution of such medical books and other publications as may be received in the future, which may properly be termed property of the Oklahoma State Medical Association. The Editorial Board is instructed to submit its recommendations to the President of the Oklahoma State Medical Association, following its meeting, so action may be taken on such recommendations by the Council at its first meeting following the report."

Seconded by Dr. Ewing and carried.

On motion the Council adjourned.

L. S. Willour, Secretary.

American Doctor Experiences Trouble In War-Torn China

From William W. Reid, of the Board of Foreign Missions of the Methodist Episcopal Church, has come a communication reciting the experiences of S. H. Liljestrand, M.D., Methodist missionary now in the Chinese war zone. Because of its interest, Mr. Reid's letter is being reproduced here.

"I am sure all your readers will be interested in the experience of S. H. Liljestrand, M.D., missionary of the Methodist Church in Chengtu, West China, along the Burma Road, and perhaps one or more readers may be interested in giving aid to his hospital. Dr. Liljestrand (M.D. Syracuse, 1915) is a native of Jordan, N. Y., and has been in China since 1916.

"The Women's Hospital, connected with West China Union University, Chengtu, was completely destroyed in a fire which followed a Japanese air raid in August.

"'The fire which destroyed the Women's Hospital destroyed all of my cystoscopic and electrotherapeutic apparatus, and the accessories of a general gynecological clinic,' writes Dr. Liljestrand. 'Fortunately I had loaned a cystoscope to the Men's Hospital a block away. Also, the radium was saved, being in a patient that night. The patient was ambulatory. She went to a China hotel because of the fire. In the morning her honorable husband informed us of her whereabouts and the radium was recovered! I still have only fifty milligrams — but that is a mighty help.

"'I lost a diathermy machine; an ultra-violet lamp, large size; three adult size cystoscope; one infant's and one children's cystoscope galvanic electric apparatus.

"'The first also destroyed our medical periodicals — including those on urology, surgery, gynecology and obstetrics.

"'I would be very glad if we could get second hand apparatus, and used copies of magazines. There continues to be a great demand for our service in this war-torn section of China.'

"If any of your readers are interested in assisting Dr. Liljestrand with used or good conditioned material, will they please communicate with the Medical Department, Board of Foreign Missions, Methodist Church, 150 Fifth Avenue, New York City. Sincerely yours,"

Fellowships In Psychoanalysis Established

Three additional Sigmund Freud Memorial Fellowships for Psychoanalytic Training, to begin September, 1941, have been announced by the Boston Psychoanalytic Institute.

The fellowships are open to graduates of a recognized medical school who have had at least one year of general hospital training and two years' work in psychiatry and covers tuition fees only. One additional fellowship for training in applied nontherapeutic psychoanalysis will be open to those who have a doctor of philosophy degree or an equivalent degree in the field of anthropology, sociology, pedagogy, and so on.

Further information may be obtained from Dr. Moses Ralph Kaufman, chairman of the educational committee, Boston Psychoanalytic Institute, 82 Marlborough Street, Boston. Applications close on February 1.

Award In Laryngology, Rhinology Announced

The Casselberry Prize Fund of the American Laryngological Association will award $150 for original work in laryngology and rhinology, it has been announced. The thesis must be submitted before February 1. Additional information may be obtained from the secretary of the association, Dr. Charles J. Imperatori, 108 East Thirty-Eighth Street, New York.

Refresher Course In Radiology Planned

The Radiological Society of North America, Inc., has announced a refresher series to be conducted at the Hotel Statler, Cleveland, December 1-6. It will be the third annual course to be offered as a part of the annual meeting of the society. Additional information may be obtained from Dr. Lewis G. Allen, 905 North Seventh Street, Kansas City, Kan.

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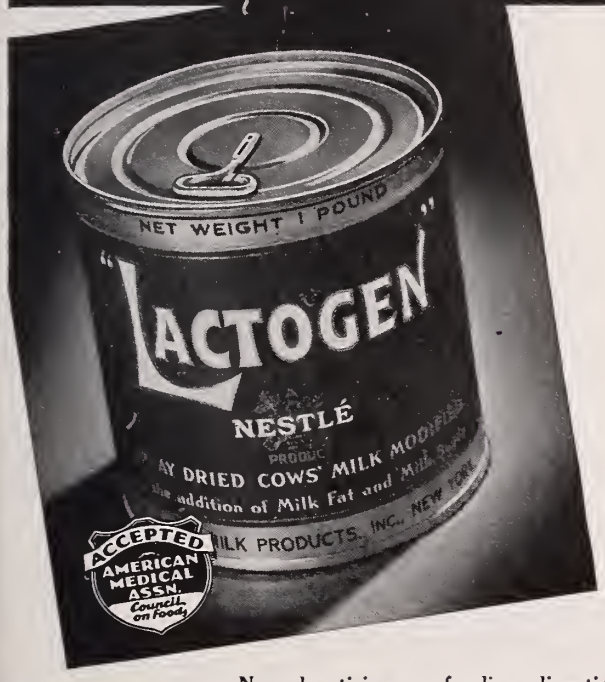
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ABSTRACTS : REVIEWS : COMMENTS and CORRESPONDENCE

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments From
LeRoy Long Clinic
714 Medical Arts Building, Oklahoma City

"Mesenteric Vascular Occlusion." Report of a Case in Which Operation was Performed. By John H. Blue, M.D. and Charles R. Lafferty, M.D., Montgomery, Alabama. Southern Medical Journal, Volume 33, Number 9, September 1940. Page 968.

Referring to the high mortality in connection with mesenteric vascular occlusion, the authors indicate that the mortality has been reduced during the last ten years by proper and early operative procedures, the procedure usually being resection of that part of the intestinal tract involved.

Emphasis is placed upon the great importance of bearing in mind the possibility of mesenteric vascular occlusion in the presence of what appears to be an "acute abdomen."

The symptomatology is not definitely characteristic, and for this reason the proper pre-operative diagnosis is made in but relatively few cases. This disastrous error is sharply emphasized by a quoted report by Trotter (Cambridge University Press, 1913) who, after an analysis of 360 cases, reported that a correct preoperative diagnosis had been made in only 13.

While the symptomatology may be obscure, attention is directed to the uniform presence of abdominal pain, it being "the predominant symptom in all cases." While in the early hours the location and intensity of the pain may be erratic it becomes persistent and intolerable as the pathology develops. "The most characteristic feature of the pain is the fact that it is all out of proportion to the physical findings." There is always a high leukocytosis.

There is a case report of a white man, 66 years of age, who was admitted to the hospital the next day after an illness beginning with sudden, generalized sharp abdominal pain. This became more and more severe. There were nausea and vomiting. "There was no history of diarrhea, bloody stools, chills, fever, or constipation. The patient claims to have passed gas."

General inspection indicated a patient who was very ill. Temperature 99, pulse 80, respiration 22, blood pressure 152/86.

The abdomen was rigid and distended, and there was tenderness in the left lower part of it. There were no masses.

The blood count was Hgb. 85 per cent, R.B.C. 4,200,000, W.B.C. 15,750. The urine was negative. The provisional diagnosis was an acute surgical lesion in the abdomen, probably acute appendicitis.

"The abdomen was explored through a McBurney-Wier incision. On opening the peritoneal cavity there was seen a large quantity of blood-tinged peritoneal fluid. Exploration of the small intestine revealed a lesion approximately in the middle portion of the ileum, measuring three feet in length. The bowel was edematous, thickened, and hemorrhagic. Resection of the involved small intestine and mesentery with end-to-end anastomosis was performed. The wound was closed in layers with no drainage. The specimen consisted of a segment of the small intestine measuring 60 cm. in length. It was of a dark purplish red color, edematous, and the lumen was filled with hemorrhagic fluid. The microscopic examination revealed gangrene of the intestinal wall with infiltration by acute inflammatory cells."

The postoperative course was entirely satisfactory. The patient was sitting in a chair twelve days after the operation, and was discharged two weeks after the operation, at which time the condition was good, and it was believed that the patient was cured.

It is indicated that the pathology responsible for the early symptoms is thrombosis of the mesenteric artery or any of its branches. This is preceded by "progressive arteriosclerotic changes similar to that seen in the coronary arteries."

The difficulty may begin by thrombosis of the mesenteric veins in connection with such pathology as puerperal infection, phlebitis, appendicitis, and other suppurative conditions of the peritoneal cavity. Infected emboli from the heart, the epididymis, and from various inflammatory foci in different parts of the body may be predisposing causes.

At operation it is important to determine whether viability of the affected area has been lost. If the blood supply has been destroyed, the viability is lost. It is suggested, based upon the advice of J. Douglas, in an article on Mesenteric Vascular Occlusion, published in the Annals of Surgery, October, 1935, that a practical way to determine the status of the circulation is to puncture a small vessel in the mesentery close to the intestinal attachment with a needle "to see if blood still escapes from the needle prick."

"It must be recognized that recovery may take place after one-third or even one-half of the intestine has been resected." There is a reference to reports from several surgeons in which there was even much more extensive resections.

Comments: The important lesson to be learned from reports like this is that an analysis of the early symptoms and signs, based upon knowledge, wisdom and good judgment, is invaluable; and no less invaluable prompt surgical intervention in the case of any patient where mesenteric vascular occlusion cannot be definitely excluded.

LeRoy Long, Sr.

"Transverse Abdominal Incisions In Pelvic Surgery." A Report of Seven Hundred Cases By G. Wilson Hunter, M.D., Fargo, N. D., (From the Fargo Clinic), April 1940, Vol. 39, No. 4, Page 593.

The most important feature of this review is the discussion of the advantages of the Pfannenstiel incision and the Bardenheuer incision. There is almost complete absence of postoperative hernia and evisceration. In this series there were no postoperative hernia. There are better scars.

The author contends that there is better exposure, better blood supply, less tendency to adhesions, and absence of lateral tension to the wound.

He also points out the diminished morbidity and mortality with a shorter hospital stay.

There is a review of the operations performed and it is rather significant that most of the operative procedures were relatively conservative and not very extensive.

Comment: As is well known and mentioned in this article, the transverse abdominal incision for pelvic op-

erations are not widely employed. There are unquestionably distinct advantages to the use of transverse abdominal incisions but they are not devoid of disadvantages which, I am afraid, in this article are overlooked in the author's enthusiasm for this type of incision in all pelvic surgery.

It is quite true that postoperative hernia is decidedly less likely. There is likewise a better scar. There is also some diminished discomfort after operation.

However, the exposure is not as great as in the midline incision unless the rectus muscle is divided on each side and in instances where exposure must be over a rather wide field, it is my preference not to employ transverse incisions, despite the fact that I am very fond of them in many of the less radical pelvic operations. They certainly have a distinct place of usefulness but it would seem to be too biased to endorse the use of transverse lower abdominal incisions to the exclusion of the midline incision.

Wendell Long.

"Evaluation of Stilbestrol As a Therapeutic Estrogen." By U. J. Salmon, M.D., S. H. Geist, M.D., and R. I. Walter, M.D., New York, N. Y., American Journal of Obstetrics and Gynecology, August 1940, Vol. 40, No. 2, Page 243.

This is an additional report upon the clinical use of Stilbestrol, "a compound unrelated chemically to natural estrogens which, however, possesses estrogenic properties."

This study was conducted on a group of 45 patients and in some of the patients there were morphologic studies of the endometrium, vaginal mucosa, and gonadotrophic hormone assays.

Diethyl stilbestrol was given orally and intramuscularly in varying dosages. The oral dose varied from 0.3 mg. to 6 mg. daily and the intramnscular dose varied from 1 to 5 mg., given from 1 to 3 times weekly.

In those instances where vaginal smears were stndied, the smears were indicative of estrogen effect. Likewise there was a decided estrogen effect npon the vaginal mucosa as demonstrated by vaginal mucosa biopsies. There was a similar demonstration of estrogen inflnence on the endometrium stndied in the form of endometrial biopsy. When sufficient stilbestrol was administered it appeared to inhibit the excessive gonadotropic hormone in the menopause patients.

Stilbestrol relieved the hot flushes of menopause but it did not, in the interpretation of the authors, impart to the patient the feeling of well being and nervous stability that usually results from treatment with natural estrogens.

Toxic effects were rather common and seriously detracted from the therapeutic value of the drug. Nausea, vomiting, and vertigo, either singly or in combination, occurred most frequently (25 cases). Thus, toxic symptoms were observed in 64 per cent of the 45 patients.

The authors record their results as improved in 29 of the 45 patients, complete relief of symptoms in 8, and no improvement in 8. "The symptom most easily relieved was the flushes. If other symptoms were present, such as nervousness, weakness, vertigo, etc., they were apparently affected little, if at all. Following the discontinuation of treatment, the symptoms usnally recurred within one to two weeks. The rapidity with which symptoms recurred after the discontinnation of the treatment was very striking in all but a few cases."

Because of the high incidents of toxic symptoms, it is the opinion of these anthors that the usefulness of stilbestrol as a therapentic agent is considerably reduced.

Comment: There have been numerous reports since 1938 when Dodds reported the synthesis of stilbestrol. All of these clinical reports have attested to the fact that, in the human being, stilbestrol relieved menopausal symptoms. However, in all of the reports there were toxic symptoms but the severity and the incidence of these symptoms varied considerably in the different series of cases reported. There was, likewise, great difference in the dosage employed.

Two of the more recent reports are: (1) A Clinical Study of Stilbestrol by M. Edward Davis in the American Journal of Obstetrics and Gynecology, June 1940, volume 39, page 938.

(2) The Oral Administration of Stilbestrol by John C. Weed, B. Bernard Weinstein and others in the same journal and the same volume, page 1047.

I have employed stilbestrol in the treatment of a small group of patients with menopause symptoms since September, 1939, and find myself in general agreement with other authors as to the effectiveness of the compound as an estrogenic substance. However, all agree that there are toxic symptoms, more pronounced when the drug is administered orally, and, as yet, no definite means of foretelling which individual patient will develop these toxic symptoms.

It should also be said that the drug is sometimes very effective and useful in patients who have obtained inadequate relief from the employment of the biological estrogens. It is also true that certain individuals who have not been able to obtain relief on stilbestrol will obtain relief with the biological estrogens. The great advantage of stilbestrol, therefore, lies in the fact that it is effective by oral administration, is a synthetic compound which can be produced rather simply, and adds one more estrogenic drug which can be employed in those individuals unable to obtain relief from biologic estrogens.

It would therefore seem logical to individualize estrogen therapy and employ stilbestrol in a certain group of very resistant patients, constantly on guard for toxic symptoms.

Weed et al have suggested that the tablets of stilbestrol be administered by powdering and placing in milk.

While the question of the criteria of snfficiency of estrogen therapy does not properly fall in this discussion, there is a rather close connection. The primary indication for the use of all estrogens is frequently the menopausal symptom syndrome. There has been objection from certain workers that it was impossible to record changes in these subjective symptoms sufficiently accurately to determine the effect of the drug, the proper mode of administration, and the necessity for continuation of treatment. These workers have felt that an objective criterion snch as vaginal smears, vaginal mucosa biopsies, or gonadotropic hormone assays should be employed to determine the choice of estrogenic therapy, its mode of application, and the extent of the treatment. In this direction, many series have been reported where estrogenic therapy need not necessarily be employed to objective criteria such as vaginal smears. It is significant, however, that the subjective symptoms of patients frequently disappear long before there is an objective change in vaginal smears and, likewise, the subjective symptoms can be controlled with a smaller dosage of estrogenic substance than would be necessary to control the objective finding of change in the vaginal mucosa. It is, therefore, the present feeling of most of us that estrogenic therapy need not necessarily be employed to the extent of satisfactory objective changes but only to the extent of satisfactory relief of subjective symptoms and that the minimal dosage for such purpose and the minimal length of administration of estrogens for such purpose is the most satisfactory form of procedure. Naturally, in using stilbestrol, one should recognize the frequency of toxic symptoms and discontinue all medication upon the appearance of any of these symptoms.

Wendell Long.

"Abdominal Pregnancy." By Clifford B. Lull, M.D., Philadelphia, Pennsylvania; American Journal of Obstetrics and Gynecology, August 1940, Volume 40, No. 2, Page 194.

This author is reporting five cases of abdominal preg-

uancy and draws conclusions which are ably and fully discussed in a joint meeting of the New York, Philadelphia and Boston Obstetrical Societies in April, 1940.

Each patient must be individualized. "Permitting the patient to advance to full-term increases the maternal risk and decreases the chance of having a living offspring."

"If death of the fetus occurs, it seems advisable to defer operation for 3 to 4 weeks until the vascularity of the placenta has been markedly decreased." "During the waiting period the patient should be kept in the hospital under close observation for hemorrhage and infection of the gestational sac. If the fetus has been known to be dead for several weeks, immediate operation is indicated." The natural precautiou of typing for transfusion should be made.

"Careful removal of the child without disturbing the placental site is important."

When hemorrhage is encountered and packing is necessary, removal of this packing, after it has been loosened on several successive days, should be attempted only after careful preparation has been made for further transfusion and reopening of the abdomen.

"Where the placenta is alive and a living child removed, no attempt at separation or removal of the placenta should be made. The abdomen should be closed without drainage."

It is pointed out that the placenta, under such circumstances, usually absorbs and, in the discussion, it is stated that this absorption period usually covers over one year's time.

Comment: Probably the most important things to be obtained from this article are the individualization of these patients, and the now recognized principle that the living placenta in such situations should not be disturbed and no attempt made at removal. It should also be well recognized that they should be carefully followed.

Wendell Long.

"The Use of Oxygen and Oxygen-Helium, With Special Reference To Surgery." By Walter M. Boothby, Charles W. Mayo and W. Randolph Lovelace, II; Surgical Clinics of North America, August 1940, Mayo Clinic Number, Volume 20, Page 1107.

In 1938, Bulbulian, Boothby, and Lovelace developed an inhalation apparatus for the administration of oxygen which was designed primarily for use by aviators flying at high altitude. However, since its development, the apparatus has been used in treating about 3580 patients for numerous conditious at Mayo Clinic in 1938 and 1939. The inhalation apparatus consists of three separate parts: (1) The mask, which is of nasal or oronasal type, (2) The regulatiug device, and (3) a reservoir-rebreathing bag which conserves oxygen. This apparatus permits the administration of any concentration of oxygen from that of 40 or 60 per cent as previously used in the treatment of pneumonia up to high concentrations, including the administration of essentially 100 per cent oxygen in the inspired air.

The possibility of administering high concentrations of oxygen has opened new fields in which oxygen therapy is proving of great value.

In the past, oxygen usually has been used in concentrations of from 40 to 60 per cent for the treatment of anoxemia due to defective saturations of the hemoglobin with oxygen in the lungs. Anoxemia of this type occurs at high altitude, in pneumonia, pulmonary edema, and congenital types of congestive heart failure.

The authors call attention to anoxemia resulting from four other conditions which may be equally well benefited by the administration of the proper concentration of oxygen. They are: (1) Deficiency in the mass of available oxygen from physiologically deficient hemoglobin as in anemia, carbon monoxide poisoning, and in the presence of methemoglobinemia or sulfhemoglobinemia. (2) Stagnant anoxemia because of defective circulation, as in surgical and traumatic shock without hemorrhage and in certain types of heart disease. (3) Histotoxic anoxemia wherein the cells cannot take up and use oxygen, as in hydrocyanic acid, cyanide, or alcohol poisoning. (4) Local anoxia from relatively localized injury to the circulation caused by trauma to the blood vessels and tissues or from pressure in subcutaneous tissue as in gas gangrene.

High concentrations of oxygen should be administered to patients affected with the anemic type of anoxemia as a prophylactic measure after major surgical procedures in order to increase the amount of oxygen in simple solution and also to insure that the hemoglobin is saturated completely.

Duriug the past two years it has been found that the administration of 100 per cent oxygen in combination with the use of suction is almost always more efficient for decompression of especially severe cases of gaseous distention than either method alone. The rationale for this form of treatment is that 70 per cent of the gas in the intestine is nitrogen. When 100 per cent oxygen is inspired, the partial pressure of nitrogen in the lungs is reduced quickly to approximately 0 from the normal partial pressure of 570 mm. of mercury. By diffusing from a region of high pressure to a region of lower pressure the nitrogen in the plasma of the blood diffuses into the alveoli and is expired. Likewise the nitrogen of the tissue fluids or body cavities diffuses into the plasma and then to the alveoli and is expired. Beneficial effect is obtained in 12 to 24 hours.

When, at the time of the operation, the question arises as to whether an obstructed or strangulated segment of bowel should be resected, the decision can be aided by having the anesthetist administer 100 per cent oxygen for a few minutes. If the color of the bowel improves, the segment is viable and probably will survive if 100 per cent oxygen is started immediately after operation. If the color does not improve, the segment should be removed.

For the past two years it has been the custom at the Mayo Clinic to administer 100 per cent oxygen after all extensive surgical procedures on the intestines. It favors healing at the site of anastomosis, helps prevent abdominal distention, and combats the development of shock.

Moon has defined shock as a "circulatory deficiency, neither cardiac or vasomotor in origin, characterized by decreased blood volume, decreased cardiac ontput, and by increased concentration of the blood" and has stated that anoxia is probably the most important factor in the operation of the vicious cycle associated with shock and tends to increase or perpetuate the circulatory deficiency. Since anoxemia is a major factor both in the development and continuation of shock, the administration of 100 per cent oxygen is advocated as an adjunct in prevention and treatmeut of surgical and traumatic shock. This results in 10 to 15 per cent increase in oxygen in the arterial blood and an even greater per cent of increase in oxygen pressure in the venous blood and tissues.

The administration of high concentration of oxygen is advised for the treatment of the common postoperative pulmonary complications, atelectasis, infarction, and pneumonia.

Because of the relatively increased consumption of oxygen in cases of hyperthyroidism, anoxemia may develop easily and tend to lead to serious consequeuces. Therefore 100 per cent oxygen is advised for patients after thyroidectomy as soon as the earliest signs of trouble develop. In case of obstruction of the upper respiratory passages due to edema, infection, irritation, tumors, foreign bodies, or lymph nodes, a combination of helium and oxygen should be tried before a tracheotomy is resorted to.

In addition to the conditions mentioned above, high concentration of oxygen is advocated for the following conditions by the authors: During and after spinal anesthesia; head injuries; obstetrical shock; cardiac conditions; after bronchoscopic examination; anaerobic infections; in conjunction with the administration of sul-

fanilamide; Caissons disease; chronic alcoholism; and asthma.

The authors have administered 100 per ceut oxygen to more than 1800 patients without observing the slightest evidence of pulmonary irritation.

They recommend that 100 per cent oxygen be given not longer than 48 honrs at one time and thereafter be regulated to 50 to 70 per cent oxygen.

We have personally nsed 100 per cent oxygen in the treatment of abdominal distention with very gratifying results.

Warren Poole.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
911 Medical Arts Building, Tulsa

"Roentgen Therapy For Acute Sinusitis." By Henry L. Williams, M.D., and Walter C. Popp, M.D., Rochester. Annals of Otology, Rhinology and Laryngology, September, 1940.

Dysart in 1939 reported favorably on this method of treatment. Gatewood in 1940 reported many unfavorable observations. Gatewood maintained that most of the favorable results on this method of treatment were reported by radiologists and that this alone made it difficult to trnly evaluate the resnlts. This illustrates the universal lack of unanimity of opinion on the therapy of x-ray in sinnsitis. Closer pernsal of reports shows that Dysart reported results obtained in acute conditions while Gatewood had reference to chronic infections, which might help some to account for their wide diversity of opinion.

This paper is a report of a roentgenologist and rhiuologist working iu conjunction. Chronic cases were excluded. Only the acute cases were taken for this report that had as their principal symptoms pain and tenderness. They were divided into moderate and severe types. Moderate cases were classified as those that wonld tolerate repeated firm pressure over the affected area and that did not require morphine for relief and that slept fairly well. Severe cases were those that would not submit to repeated pressure over the affected area and that reqnired morphine for relief of pain or to sleep. Cases that were hospitalized and had other complications were included in the severe group.

The result was called "good" when pain disappeared in from one to six hours following treatment, wheu tenderness disappeared in the same time and the congestion of the mncosa and cessatiou of the discharge ceased. Most of the cases received the Dowling pack treatment in addition, some hot compresses and some sulfonamide drugs. As you will note, then, more thau one therapeutic method was used, so the report is made on clinical impressions, rather than on per cent of improvement. One must take into consideration also the fact that acute sinusitis tends to spontaneous recovery.

This series of cases numbered fifty-six. Thirty-one were "severe;" twenty-five were "moderate." Both groups were again divided into those whose symptoms had been present from one to five days preceding treatment and more than five days preceding treatment. In the "severe" gronp, there were six cases in which pain and tenderness disappeared after the first treatment aud one in which the symptoms disappeared after the first treatment and one in which the symptoms disappeared after the second treatment and two cases did not respond until the third treatment—these had had symptoms one to five days. Resnlt was called moderately good. Eighteeu "severe" cases had had symptoms more than five days. Of these the symptoms disappeared after the first treatment in nine cases; after the second treatment in two cases; after the third treatment in one case; six cases were apparently unaffected.

Of the twenty-five cases classified as "moderate" these were also divided into those with symptoms of from one to five days and those with symptoms of over five days standing. Nine cases were of the first gronp and eight were relieved of pain and tenderness after the first treatment and one after the second treatment (all showed good response to treatment); of the sixteen with symptoms of over five days standing, eight cases were free of symptoms after the first treatment, six cases showed moderately good results and two cases showed no apparent effect of the therapy.

The cases with the most acnte symptoms were given 50 r and those of over five day symptom dnration were given 75 to 100 r. Patients were treated on alternate days, one to three treatments being given.

Clinically it was noticed that the good resnlts were: 1. Relief of pain and headache; 2. Noticeable increase in the discharge; 3. Diminished engorgement of the nasal mucosa. The results were best when instituted early and were better on an original attack of sinusitis than in recurrence. The conclusion is that this therapy is a useful adjnnct in regard to symptomatic relief.

"Non-Surgical Treatment of Diseases of the Nose and Pharynx." By Gordon D. Hoople, M.D., Syracuse, N. Y. Trans. American Laryngological, Rhinological and Otological Society, Inc., 45th Annual Meeting: pp: 178-184. From the October Edition of the Digest of Ophthalmology and Otolaryngology.

In preparation for this paper I read over most of what has been written ou treatment of the nose and throat during the past five years. If one separates the chaff from the wheat, a very good picture can be seeu as to the proper way to treat rhinolaryngologic diseases.

For acute rhinitis, there are nearly as many methods of treatment as there are doctors who treat the condition. I know of no drng or measure which will consistently shorten the duration of colds. It is true that occasionally we treat what appears to be an acnte rhinitis and in twelve to twenty four honrs the patient is rid of his symptoms. It is probable that these attacks are the result of allergy, dietary indiscretions, etc. To enumerate everything which has been snggested or used for acute rhinitis would require several hours for the recitation. A few words, however, can be said about some commonly used measures. Rest and elimination need no emphasis except perhaps to say that it is generally conceded that the former is the most valuable remedial agent we have for acute infections of the nose and throat. If there is no temperatnre, it is apt to be neglected. It is rather common practice to prescribe a vasoconstrictor for acute rhinitis. Its use is, of course, not curative but often gives temporary relief. The work done by Lierle and Moore, and Proetz, which was confirmed by Walsh and Cannon, on the action of certain drugs which are used in the nose, is of value to all otolaryngologists who use the informatiou. Working independently, they came to the conclnsion that most drngs used in the nose have a depressor action on the cilia of the nasal mucosa. The three most commonly used vasoconstrictors—ephedrine, epinephrine, and cocaine—do not fall in this class if they are of the proper strength. Cocaine solutions np to 5 per cent, ephedrine to 3 per cent, and weak solutions of epinephrine iu physiological saline, have no harmful effects on the cilia. Addition of other ingredients detracts from their efficacy.

Some new remedies for acnte rhinitis have been recommended, among them sulpher dioxide by Rawlins and Camirol and a camphor-menthol-iodoform solntion advocated by Coates, Davis and Gordon. These are too new to evalnate at the present moment.

The management of acnte sinusitis should be essentially medical. Occasionally surgery must be in the picture, but this is usually when there are complications, or threatened complications. Rest, elimination, proper diet, shrinking sprays, heat, and medication for pain are in

order. The frontal sinus, although not most frequently involved, seems to give the most trouble. I think I have been reasonably successful in the management of the cases of frontal sinusitis which have come to me for treatment. I believe the less intranasal manipulation there is in uncomplicated frontal sinusitis, the more fortunate the immediate and subsequent history will be.

The late D. Campbell Smyth once said that in acute maxillary sinusitis he only occasionally resorted to irrigation and that rest, in particular, and the usually applied local measures would bring about a cure in the great majority of cases. I have found that he was right. I irrigate the antrum much less frequently than was my former practice. Incidentally, when puncture is indicated, I am one who adheres to the inferior meatus as the site of choice. VanAlyea has reported that in 163 anatomical specimens, the maxillary ostia were inaccessible for middle meatal irrigations in 50 per cent. I have found the percentage of inaccessible ostia nearly the same. If the attempt is made to enter an inaccessible ostium, trauma must be present. If trauma is necessary, it is better to have it at a point some distance from the ostium.

Heat is frequently used in acute sinusitis, applied in several ways. Andrews and Osborne, in a study of the temperature of the maxillary sinus after treatment by various methods, place them in order of efficiency as follows: electromagnetic field and diathermy, thermospectral lamp, Cutler water-cooled lamp, compsolite short wave diathermy, and the Elliott machine. The maximum rise in temperature was from 98.2 degrees to 99.1 degrees. If this was true, the benefits of heat in sinusitis do not come from marked changes in the temperature of the sinuses themselves. The electric head bath, not mentioned above, is another method of applying heat, at times quite effective. Occasionally, warm physiological saline nasal irrigations, properly given, will afford much relief in acute sinusitis.

To facilitate discussion I am grouping together chronic rhinitis, hypertrophic rhinitis, vasomotor rhinitis, allergic rhinitis, and certain forms of chronic sinusitis, exclusive of chronic infections of the sinuses which are obviously due to dental and anatomical abnormalities. If these are excluded, my problem with this group of chronic conditions is diagnostic rather than therapeutic. Those patients who suffer from these ailments have many complaints, but speak chiefly of difficult nasal breathing and post-nasal discharge. The correct solution for the relief of these symptoms has been a challenge to me. In the first year or two of my practice, when I was still enthused with hospital routine where radical surgery on the sinuses is in order, I was puzzled when I examined patients who complained of postnasal discharge and I could find no cause in the nose for the complaint. I asked myself, "How does one treat these patients?" About this time, a rather dramatic incident happened. A patient with profuse postnasal discharge was referred to me by a fellow rhinologist. He had made a diagnosis of chronic sphenoiditis, confirmed by X-ray. He felt an operation was indicated and asked me to do it because he was related to the patient. When she presented herself for examination, I thought her general condition did not warrant surgical interference. She looked ill and was, in fact, much worse than when she had been examined at home. I called for medical consultation. It was soon found that the patient was only one step away from diabetic coma. Proper treatment was begun, and as the diabetes cleared, the postnasal discharge improved. I have been looking for causes other than nasal ever since. I am not always successful in my search, but the more diligent I am, the better are my results. A detailed account of all the possible general causes for chronic nasal conditions would unduly lengthen this paper, but they must underlie a large portion of our practice when such reliable observers as Banm, Hansel, and Mullin state that allergy, which is one of the possible general causes, is present in about 30 per cent of all nasal conditions. This figure may be too high or too low, but it gives a hint as to the size of this problem.

Diet is important, for diet can condition the host. Some good articles have appeared on the effects of various deficiencies and excesses. The use of specific diets is sometimes urged for the relief of the conditions under discussion. Our task would be easy if it were as simple as that. As I see it, the proper diet for a patient in this group must be decided on the needs in the individual case. Sometimes correction of the diet is the answer to the problem.

Except for suggestions for symptomatic treatment, there have not been many articles during the past five years dealing with treatment for this type of patient. Galloway, Hollender, and Bernheimer have reported on the use of physical therapy. The latter reports on the effect of irradiation on allergic nasal mucosa and states that, of forty persons treated, 47 per cent are free from symptoms after three years. I have had no experience with this type of treatment, nor with the present wave of enthusiasm for short-wave diathermy. Further reports will be needed before these remedies can be accepted as valuable agents.

Acute pharyngitis can be cared for by the use of rest, elimination, etc., as advocated for the nose. Heat, in this locality, can be applied by irrigations with less danger than in the nose. In chronic pharyngitis search should be diligently made for some local or general cause. The chief local cause is, of course, chronic tonsillitis, but there are many general causes. For instance, Lillie has advocated the use of iodides in chronic granular pharyngitis, to be taken internally. If the use of iodides improves a chronic granular pharyngitis, it suggests that there is some disorder in the iodine metabolism. Many other examples could be given but the point to stress is that we will get better results if we are good diagnosticians than we will if we only apply local remedies.

For acute tonsillitis, whether pharyngeal or lingual, I would rather have rest and elimination as my therapeutic aids than any other measures of which I know. Sulfanilamide is given credit as a valuable drug in acute tonsillitis but the vast majority of these patients recover in a very few days. For certain complications, both here and in the sinuses and ear, sulfanilamide has made a place for itself in our armamentarium. It is, however, a potent drug and one does not need to administer it in every case of acute infection of the upper respiratory tract. It is well to remember also, that according to latest opinion, it usually does not kill bacteria but merely inhibits their growth. If given early there is some danger if it is stopped too soon. An exacerbation may ensue because the bacteria may still be present and the patient may lack enough antibodies to inhibit their growth. It is thought that a delay of a day or so at the start of an infection will give the antibodies an opportunity to develop and then, if the drug is stopped a little earlier nature's own defense mechanism will control the infection. In a complication like meningitis, it should undoubtedly be given early and continued for a considerable period.

"Myasthenia Laryngis." By Chevalier Jackson, M.D., Philadelphia. Archives of Otolaryngology, September, 1940.

This long, illustrative, instructive article is full of pertinent points for the one who does throat work. The author's conclusions are as follows:

1. Myasthenia laryngis is a morbid entity entirely independent of chronic laryngitis, which may or may not be concurrent. It is a muscular disability as distinguished from a mucosal inflammation.

2. There seems to be a failure on the part of laryngologic writers to recognize muscular asthenia as the fundamental condition in hoarseness and vocal impairment of singers, clergymen, evangelists, public speakers, incessant conversationalists and other abusers of the

voice. Most writers consider only chronic mucosal inflammation in such cases.

3. In clinical work, in a large proportion of the cases of chronic hoarseness associated with vocal abuse and supposed to be due to chronic laryngitis, the condition is really a muscular disability, involving most severely the thyroaryteuoideus muscles. Failure to recognize this fundamental fact explains the frequent disappoiutment in the treatment of chronic hoarseness.

4. The larynx, with its controllable supraglottic and infraglottic air column, constitutes an air column instrument closely analogous to the subject of the laryngeal phonatory mechanism. Careful observation of my lips through the transparent mouthpiece, together with the subjective sensation of the muscular action concerned, have convinced me of the following facts: 1. The action of the lips in setting in vibration the air column of the cornet consists of contraction of the orbicularis oris muscle, resisted by bilateral contraction of the two lateral groups of diverging muscles, one at each end of the mouth. 2. The guying of the angles of the mouth precedes the contraction of the orbicularis. The fixation thus afforded makes a slitlike chink and at the same time enables the orbicularis muscle to firm the edges of the upper and the lower lip into bands that are set in vibration when air is forced between them in their firmly held position. 3. It is not the direct impact of the vibrating lip margins that sets the air column in vibration but rather the siren-like cutting of the air stream into puffs.

5. Every one of these actions has an anology in laryngeal phonation. Observation with the mirror and palpation of the neck, analyzed in the light of my studies of the phonetic mechanism of the cornet, have convinced me that the laryngeal phonatory mechanism consists in contraction of an orbicular group of muscles preceded and opposed by a guying group of divergent muscles. Unresisted, the orbicular group would cause a more or less circular glottic chink. The prior endwise guying by the divergent group serves as fixation points; the pull against these points results in an elongated chink, and enables the thyroarytenoideus muscles, which constitute the glottic margins, to firm these margins as necessary for the pitch desired for the fundamental note.

6. In developing phonation nature seems simply to have made use of the phylogenetically earliest primary valvular mud-excluding laryngeal function, using the opening and the closing mechanisms in opposition to each other. The firmer the margins, the quicker the recoil; hence the greater the vibratory frequency aud the higher the pitch of the fundamental note produced.

7. The studies mentioned here show that myasthenia laryngis is the result of overworked thyroarytenoideus muscles and that this fact is fundamental to diagnosis, prophylaxis and treatment of chronic hoarseness.

8. About 95 per cent of the aspirants for a career iu vocal music are compelled to give up because of myasthenia laryngis. The damage is usually done by the training necessary to increase the range upward. It is deplorable that composers write so much for constant instead of occasional use of notes of high pitch.

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D., F. A. C. S.
605 N. W. 10th, Oklahoma City

"The Surgical Treatment of Unequal Leg Length." Paul H. Harmon, William M. Krigsten, Surg. Gyn. & Obst. Vol. 71, No. 4, Oct. 1940.

The authors point out that the inequality in leg length is a very frequent cause of unsightly gait, which in the past we have been forced to elevation of shoes or other types of appliances. Recently surgery has corrected this to a great extent. The authors first point out that prevention of shortening can be accomplished in many cases by use of proper early surgical treatment, as in tuberculosis or pyogenic osteomyelitis, in which the epiphyseal plate is not irritated or penetrated.

In regard to physiology of bone bearing upon longitudinal growth disturbance, it has been found that involvement of the epiphyses about the knee is likely to contribute more shorteuing than about the hip or the ankle. There is approximately 68 per cent of the growth occurring in the lower femoral and upper tibial epiphyses, as a total.

The authors are rather strongly opposed to prolonged immobilization in any condition as they feel there is definite shortening resulting.

As to causes of inequality of leg leugth, a lengthy table is presented which deals with fractures, bone infections, bone tumors, congenital abnormalities and disuse retardation of growth, such as residual of poliomyelitis or prolonged cast immobilization.

There are three major methods of equalizing leg length. First, by operative slowing of growth of the leg by epiphyseodesis or epiphyseal arrest. "It has a definite field of usefulness, but the greatest care must be practiced in the selection of cases for the operation, especially in selection of the appropriate age for a given amount of shortening." The usual cause of failure is that the operation is performed too late to secure satisfactory relative lengthening of the unsound leg. However, in well selected cases this is a very excellent method and is certainly one which is the least dangerous of the three.

Second method is equalization by shortening the long leg. This is the most accurate, exact method of equalizing leg length. The authors describe several techniques, such as by step-cut operation, resection of bone with intermedullary peg and on lay grafts, and the use of division of the bone and simple overlapping of the fragments.

Operative lengthening of the lower extremity bones is quite dangerous and requires the most careful technique, and is still questioned as a valuable procedure by many surgeons. Considerable time is taken and the patient is usually under care for well over one to two years before he is allowed to be about without support on the extremities. This method is used only on cases in which the patient is very short of stature and who would be psychologically disturbed by making him still shorter. Only a very limited group of surgeons are qualified to do this type of operation.

"Subdeltoid Bursitis." Alanson Weeks. Archives of Surgery, Vol. 41, No. 2, August, 1940.

The author points out that some six years ago he mentioned the treatment of subdeltoid bursitis generally described in surgical books by the use of old methods of diathermy, heat, and manipulation, stating that since 1908 he has been using a method which has been very satisfactory, and which is not in general use, that is, the method of needling. Either with local or light gas anesthesia the shoulder is thoroughly needled about the subdeltoid region, in a more or less fanshaped area, thoroughly puncturing the tense bursa. The author states that almost every patient obtained almost immediate relief of this condition by the use of needling and that generally speaking, further care is unnecessary. Ninety per cent of acute pains about the shoulder are due to inflamed subdeltoid bursa, and, according to the author, each of these cases can be relieved completely by this method.

The above articles abstracted by Dr. Howard B. Shorbe.

INTERNAL MEDICINE

Edited by Hugh Jeter, M. D., F. A. C. P., A. S. C. P.
1200 North Walker, Oklahoma City

"Etiology of Acute Hemorrhagic Pancreatitis With Special Reference To The Vascular Factors." An Analysis of Autopsies and an Experimental Investigation. By C. J. Smyth, M.D., Ann Arbor, Michigan; Archives of Pathology, September 1940, Volume 30, No. 3, Page 651.

The questiou often arises, what is the cause of hemorrhagic pancreatitis? These authors have nicely reviewed the etiological factors and given some interesting analyses of autopsies and experimeutal iuvestigation. They conclude that current theories as to the genesis of acute hemorrhagic pancreatitis do not adequately explain the mechauism of the production of the disease.

There is abundaut evidence in the literature to show that vascular disturbances play an important role.

They believe that the solution to the problem will be found in experimeutal studies other than autopsy material.

Localized areas of pancreatic necrosis were uniformly produced in dogs by injectiug mercury into the pancreatic arteries, but hemorrhagic disease did not follow.

"Occurrence and Significance Of Congenital Malignant Neoplasms." By H. Gideon Wells, M.D. Chicago, Illinois; Archives of Pathology, August 1940, Volume 30, No. 2, Page 535.

This is an extremely interestiug critical review of the questiou of congenital malignaut neoplasms, in which the author draws many valuable conclusions and questions material from history which we have beeu prone to accept as facts. In a series of 3,000 necropsies he found only four congenital malignant neoplasms and these were all malignant tumors arising from the nervous system or the so-called neuroblastomas.

This article is loug and canuot be satisfactorily abstracted because many fiue points relatiug to the nature of tumors and neoplasms are brought out.

Everybody observes neoplasms in pregnant individuals and the question naturally arises, will the baby have such a maliguancy? Or can this maliguancy be carried through the blood stream and give metastasis to the fetus? The auswer by Dr. Wells is no, because very few, only 66, autheutic cases have been established.

UROLOGY

Edited by D. W. Branham, M. D.
502 Medical Arts Building, Oklahoma City

"Chemotherapy In Nonspecific Infections Of The Urinary Tract. Present Status." Edwin P. Alyea, M.D., and Louis C. Roberts, M.D., Durham, N. C. American Medical Journal, October 1940.

The following statement summarizes the present day concept of the sulfonamide drugs so far as their use iu urology is concerned.

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A comparison of the colon bacillus infections treated with sulfanilamide aud sulfapyridiue shows practically the same, or 81 per cent cured.

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In reply to the inquirer's question as to the criteria determining recovery from the disease, The Journal says that many patients experience a period of arrest, but only after two or three years of freedom from fever and absence of other symptoms can a patient be considered to have recovered.

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"In the opinion of the appellate department, superior court, Los Angeles County, Calif.," The Journal of the American Medical Association reports, "medical services are necessities of life within the meaning of a California statute (Code of Civil Procedure, section 690.11), which provides that when a judgment is based on a necessary of life the judgment creditor may execute on up to one-half of all wages earned by the judgment debtor."

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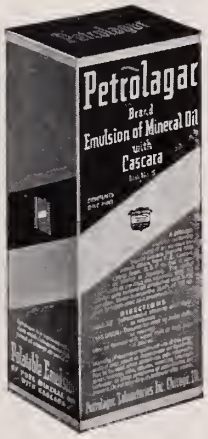
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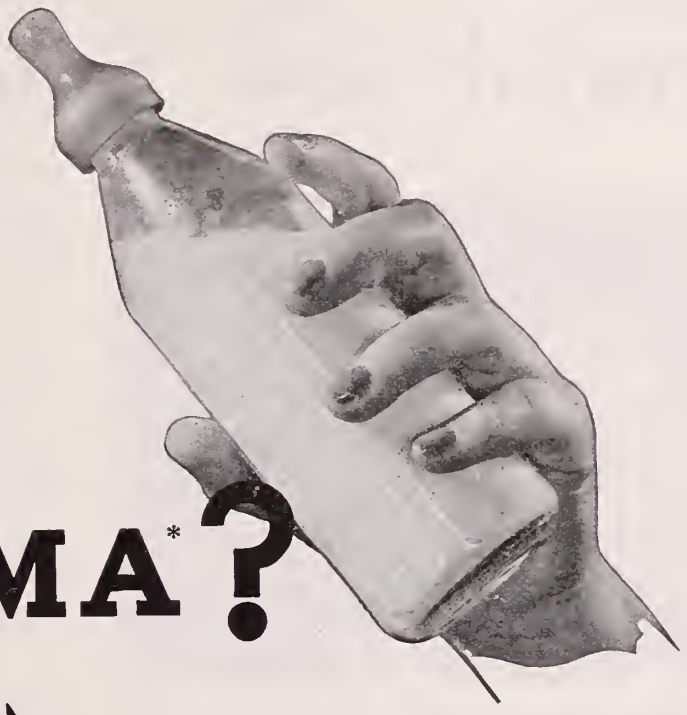
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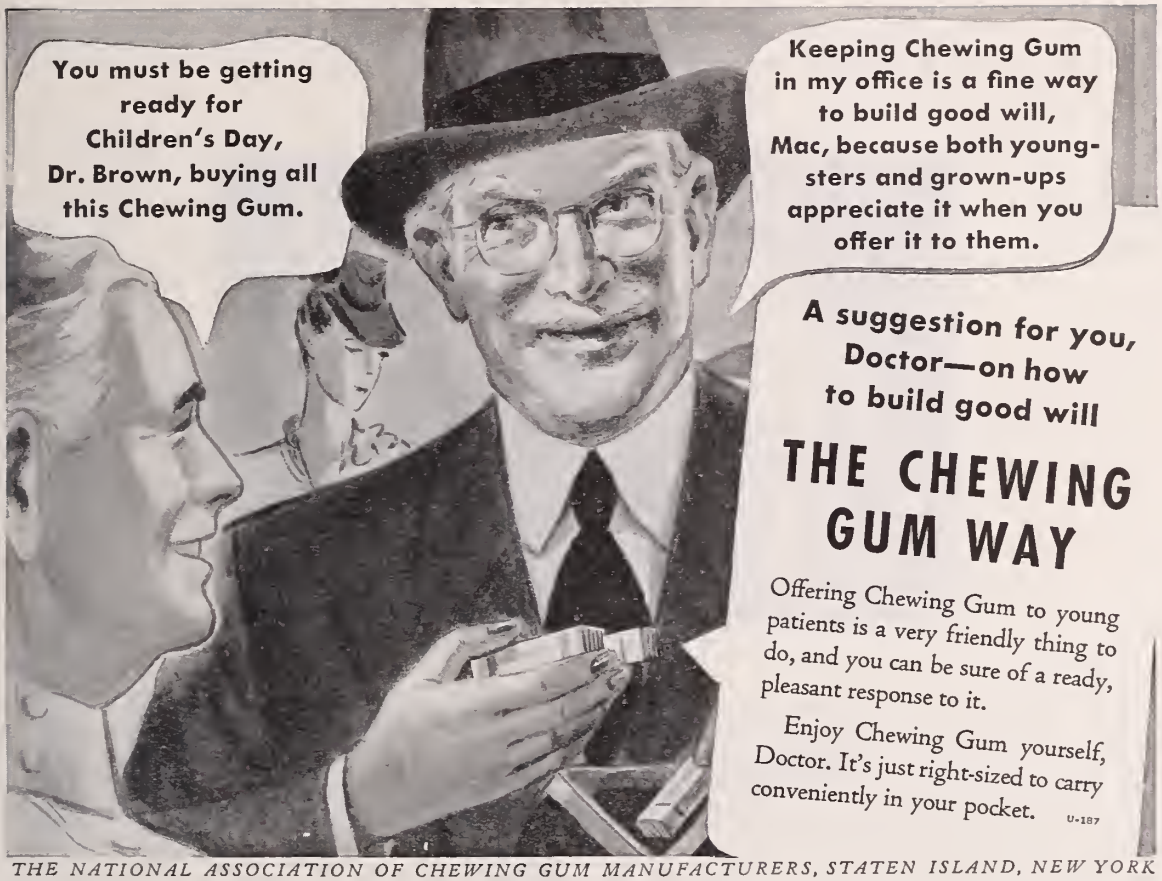
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He may find only barren, worthless wastes. Or he may come upon rich deposits of minerals, or great stands of timber—completely unsuspected.

So it is with the explorer in medical research. Leaving familiar scientific landmarks behind, he never knows whether he will find disappointment, or some new fundamental principle which may greatly benefit mankind.

But in any case, his pioneering has set up significant guideposts for those who follow.

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Present Status of Female Hormone Therapy*

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The daily mail brings an enormous volume of advertising concerning the various hormone preparations that have been developed for use in gynecological practice.

Detail men of all of the great commercial houses call upon us to call our attention to their particular brand of, or trade name for, the various hormones.

An enormous volume of legitimate literature on endocrinology has unfolded itself upon the pages of our medical magazines.

Numerous monographs and texts have now appeared to aid the clinician in improving his knowledge of the more modern concepts of endocrinology and hormonology.

All of this has been brought about by the untiring and persistent efforts of a large and ever expanding group of scientific workers in the fields of biochemistry, physiology and comparative zoology. In fact, all of the basic or pure sciences have contributed their share of work and knowledge.

The sudden advent of these works has wrought such changes in the nomenclature and phraseology of the literature that it has tended to develop an inferiority complex among purely clinical men in the study of endocrine problems. And yet, it is the clinician or general practitioner to whom the patient must look for expected benefits from all of the laboratory and research developed therapy to which this literature refers.

To the busy practitioner—untrained in research and rusty on basic sciences—a difficulty arises in his ability to evaluate the many laboratory experimental works and to differentiate between the valuable, the valueless and the indifferent modes of therapy that are offered him.

Further, he finds many times that he is hampered in using new products offered because of lack of laboratory facilities, such as are a part of the endowed clinics, medical schools, and commercial laboratories. Or again, if the laboratory facilities are available, he may not feel justified in utilizing a procedure that is expensive and out of proportion to the benefits offered.

I feel that this has been a potent factor in causing a return on the part of the profession to empiricism and a haphazard use of most valuable additions to our armamentarium—additions in the form of definite potent hormones that have now had their value established beyond a shadow of doubt in definite clear-cut clinical syndromes.

The eagerness of drug houses to be the first to reach our offices with any new agent of therapy has often caused unfortunate optimism as to results expected. This has been especially true where a product has proven to give results in laboratory animal experimentation. Results that might, therefore, be expected to follow their administration in the human, but which unfortunately fail, or go awry in such application. However, the well-trained research or laboratory worker knows, full well, the numerous pitfalls in such reasoning. He knows that each animal has a different species response to a given hormone. This has caused much confusion in arriving at stated doses of the pure hormones and potent preparations due to various statements of dosage dependent upon assays in different species as in rats or mice. Thus, the estrogenic designated dosage in

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rat units by one group and mouse units by another.

Much of this confusion concerning estrogenic dosage has been checked by adoption of the International Unit, as established by the League of Nations Committee on Standards in London, 1932.

The International Unit, now the standard for estrogenic substances, is one gamma of pure crystalline estrone, or 1/10 millionth of a gram equivalent of one mouse unit. Thus, one mg. equals 10,000 International Units and .2 gm. equals 2,000 International Units.

The unit of the gonadotropic hormones has not as yet been so easily and definitely defined, since no one as yet has been able to produce a pure material in this field that could lend itself to measurement by volume or weight. It is in this group that biological assay by various methods must still be depended upon for unit of dosage. Practically all of these methods are dependent upon the evaluation of the various modifications of the Aschheim-Zondek test and the dosage expressed in Rat units (R.U.) each unit representing the minimal amount of extract required to induce ovarian changes in immature rats in a specified time. A biological assay may be modified by many factors, such as the number and time of injections, the nature of the solvent, and the age and weight of the rats. Due to this method of arriving at dosage, you have varying potency in the products of gonadotropic substances offered for clinical use. These products often tend to deteriorate and should be dated.

Products of pregnant mares serum offered on the market today under the name of Gonadin and Gonadogen must not be confused with former anterior pituitary extractives that are impotent.

Although these products are offered as potent follicle stimulating and corpus luteal maturing hormone factors, it is not definitely known whether they are produced in the pituitary or placenta. It is a serum extractive and has not as yet been synthesized. The dosage has been arbitrarily placed at 60 rat units to be administered either at one dose intravenously to produce ovulation in 24 to 48 hours or in staggered dosage of 10 to 20 units every 48 hours in developing a single follicle.

This latter dosage is also advised in stimulating spermatogenesis in the deficient male.

The hormone of the corpus luteum has now been isolated and purified so that a definite unit of dosage is attained. The committee of Standards of the League of Nations, in 1935, adopted an International Unit which they defined as the pregestational activity present in one milligram of crystalline corpus luteum hormone. There are three methods of assay: (1) The Corner Allen Rabbit Unit (2) The Clauberg Rabbit Unit and (3) The German Clinical Unit.

Of these, the Corner Allen Unit alone is nearly the equivalent of the International Unit, the others being far under the International Unit in potency. It is my personal opinion that we as clinicians would do well to demand a product measured by the International Unit as standard, now that potent and purified preparations have been offered us.

A number of pathological or physiological varients may be aided by the clinicians, even though the term cure may not be used in many instances.

As in any field of medicine, it is true here that an intelligent understanding of the normal physiological processes of the female organism is essential to an evaluation of physiological variations.

The term "physiological variations" is used advisedly as we now recognize that many abnormalities in gynecology and obstetrics are due to a rise or depression of hormone levels above or below recognized normal levels and yet can not be placed in the category of true pathology.

NORMAL INTERACTION OF PITUITARY-OVARY AND UTERUS

The pituitary gland secretes in its frontal lobe a number of hormones.

We will not enter into that research argumentative discussion as to whether there are 5 or 32 hormones of the anterior pituitary that have to do with all of the vital processes and glands of internal secretion of the body.

It is essential that we recognize several factors in connection with the anterior pituitary secretory and ovarian secretory mechanisms.

(1) In the anterior pituitary a gonadotropic stimulating or iniating hormone is secreted that is essential to follicle growth in the ovary. Without it the ovary will not develop graafian follicles and estrogenic substance.

(2) A corpus luteal gonadotropic factor is secreted in the anterior pituitary that causes continued graafian follicles development in the form of the corpus luteal body following ovulation.

(3) There is a balancing or, might I use the term, a neutralizing mechanism, between follicle hormone of the ovary on one side and the gonadotropic stimulating factor or factors on the other. As the anterior pituitary gonadotropic hormone rises in quantity in the body it stimulates follicle development with consequent increase in follicle hormone, but as the follicle hormone increases it de-

presses the anterior pituitary gonadotropic hormone which in turn causes a lowering of the stimulus to follicle development. Thus, pituitary gonadotropic functions may be depressed by unwise and unnecessarily large dosage.

(4) With the advent of pregnancy the placenta produces or stores a substance similar in action to the anterior pituitary corpus luteal gonadotropic substance which has been called anterior pituitary gonadotropic-like substance. This terminology is confusing as it leaves the erroneous impression often that it is a pituitary hormone. Thus, the recent ruling by the Committee of Standards of the League of Nations changes this more correctly to "Chorionic Gonadotropic Hormone," since it has its origin, apparently, in the chorionic cells of the placenta.

(5) The Mullerian Duct System (i.e.) the tubes, uterus and vagina, along with the secondary sex characteristics are stimulated to normal adult development by estrogenic substances secreted in the ovary after the ovary has been properly primed by gonadotropic hormone from the pituitary structure.

(6) The inter-relating functions of this three-way system, that is, the pituitary, ovary, Mullerian duct system are very definitely influenced by other outside factors that are metabolic and nervous in nature. This is mentioned only to remind ourselves that we cannot clinically arrive at diagnostic conclusions predicted solely on pituitary, ovarian or Mullerian duct endocrine abnormalities.

The nervous systems play their role very definitely even though complexly. An example of this is the amenorrhoea of the freshman female college student, or of the new bride so often noticed.

The thyroid gland is known to alter pituitary function materially. In fact, it has become a blessed ally in many clinical syndromes in gynecology.

Thyroid Hormones in Gynecology

No consideration of practical female hormone therapy could be complete without paying our respects to the thyroid gland. Whereas, we stated that the pituitary furnished us the power that primes the gonads. By the same token we must admit that the thyroid is a valuable booster station for that power.

Waning or low pituitary function can be stimulated to normal function by the metabolic stimulating or activating powers of the thyroid.

Gonadal deficiency in hypothyroid states has repeatedly shown improvement and normal leveling with thyroid therapy alone. Thus, a basal metabolic rate should be run on nearly all patients showing gonadal deficiency and, if low, thyroid therapy should be used in conjunction with other indicated endocrine therapy.

We must remind ourselves that thyroid extract is the only really satisfactory dessicated glandular product available. It is interesting to note that better results are obtained with the crude dessicated gland than with the active principle thyroxin.

Curtis has shown in his masterful work on iodine metabolism that there are a number of factors active in normal thyroid function besides thyroxin.

We must keep our hypothyroid patients under active observation at from one to four weekly intervals if we are going to get proper results.

Individual dosage must be established according to the needs of the patient. This may vary from one-fourth grain to three grains daily. Individuals will show varying responses over a course of weeks, so that even after a maintenance dose has been established, we may find an occasional reason for raising or lowering the dosage level. This is most true in sterility cases and especially during their prenatal period when their own thyroid may show a normal physiological step up so that thyroid may or may not need to be continued.

We could spend a valuable period in reviewing the thyroid alone, since it, like the pituitary, is concerned with every syndrome in gynecology.

Again, I remind you, that detailed controversial discussion that now fills volumes in experimental endocrinology, has no place here if we hope to get down to the subject.

Mainly: What of practical value has been added to our armamentarium by the endocrinologists and their allied workers?

It is probably best to start with the pituitary, since, as Novak says: It is the dynamo that furnishes the stimulating power that is necessary for estrogenic activity.

The posterior pituitary with its valuable products—Pituitrin and its split products, Pitressin and Pitocin, are well-known and are eliminated from discussion here.

The anterior pituitary has been better understood through its study by numerous workers, who have definitely proven many of its varied functions. Many times these workers have seemed to be on the verge of producing pure products only to run into blind alleys of research.

Thus, no hormones of the anterior pituitary have been produced in pure form, though there are several indifferently potent commercial products offered.

TABLE I

Separate Anterior Pituitary Hormones Postulated

A—Gonadotropic Hormones
(1) Follicle Stimulating (Prolan-A)
(2) Luteinizing (Prolan-B)
(3) Interstitial Cell Stimulating
(4) Antagonist
(5) Synergist
(6) Activator
B—Thyrotropic Hormone
C—Adrenotropic Hormone
D—Lactogenic Hormone
E—Growth Hormone
F—Metabolic Hormone
(1) Diabetogenic
(2) Ketogenic
(3) Pancreatropic
(4) Glycotropic
(5) Gycostatic

A glance at Table I, as produced by Jensen and Folksdorf in the Journal of Endocrinology, September, 1939 issue, should be convincing evidence for the average practitioner that he should leave this field for the true full-time investigators and hope that they can give us a satisfactory clinical solution of this intricate subject in the near future.

Table II gives a few of the commercial preparations of the gonadotropic hormones.

Obviously, no medication or therapy should be advised except where definite indications present themselves for its use.

Inasmuch as the injudicious use of some of the endocrine products may cause undesired side reactions, we should be the more sure that they are definitely indicated when used.

Empiricism should now largely be superseded by definite indications for endocrine therapy.

It can safely be postulated that gonadotropic hormones can only give results in the presence of a stimulating ovary or testes. Thus, it would be foolish to expect any results from administration of anterior pituitary or chorionic gonadotropic hormone where the ovaries have been ablated by surgery or x-ray or in the congenital absence of functionable ovaries or testes, or after menopausal atrophy of the ovaries.

By the same reasoning, it follows, that substitution therapy in the form of ovarian and testicular hormones can be expected to give results in the absence of functionable glands where the organism is suffering from a deficiency syndrome.

As a matter of fact, it is in this field of substitution therapy of ovarian follicle hormone and testicular hormone that the clinicians have obtained their most brilliant results.

The field of stimulation therapy with potent anterior pituitary gonadotropic hormones still looks to the future. The clinician is still awaiting the arrival of potent and reasonably priced products. Among the products obtained by processing the anterior pituitary glands of the animals we may consider the following in Table II.

TABLE II

Gynantrin (G. D. Searle & Co.,) is an Anterior Pituitary Extractive standardized to 100 R. U. per cc.

Maturity Factor (Ayerst-McKenna & Harrison) is also an Anterior Pituitary Extract—100 R. U. per cc.

Prephysin (Chappel Brothers Inc.,) is an Anterior Pituitary Extract—25 R. U. to 1 cc.

Maturity Factor (Armour) Anterior Pituitary Extract—300 R. U. per cc.

These preparations are reported to give very indifferent results in stimulating or initiating follicle development in primary and secondary amenorrhoea, though they have been proven to give follicle response in laboratory animals.

Recently, interest has been centered on the use of extractives of mares serum which has been found to contain a very potent gonadotropic substance during the middle third of gestation.

These substances are shown to initiate ovulation in the laboratory animals, though Novak states that he could not get such results in the human.

Preparations on the market are found in Table III.

TABLE III

Gonadin (Cutter Laboratories) 1 cc. contains 200 units and is to be given 100 to 200 units every second day—furnished in 600 unit packages. Gonadogen (Upjohn Laboratories) 10 & 20 unit tablets supplied to be dissolved in sterile water for administration.

These preparations are expensive and are as yet in the experimental or questionable stage. They require a skin test for protein sensitivity before using, since they contain foreign proteins.

Gonadin has been shown to give definite stimulation with increase in development of spermatozoa in sterility cases with azoospermia and aspermia. Not enough experience is yet available to determine whether this will overcome the sterility or not in these cases, though the work of Cole sounds convincing.

In my hands where the use of gonadogen has been limited to a few cases of hypospermia and sterility with irregular ovulatory history, I have not been so fortunate in results. Two cases of hypospermia have shown an increase in sperm count after administration of gonadogen, but fertility has not as yet been established.

In five cases of female sterility with irregular menses, we have been able to bring on ovulation as indicated by prompt appearance of menses in 14 to 16 days following the in-

travenous injection, but pregnancy did not ensue.

We are still giving it a trial by varying the time element and dosage level in these cases and will continue to give it a clinical trial in future cases.

Chorionic gonadotropic hormone has been a most satisfactory addition to the armamentarium of the gynecologist. It does not stimulate follicle growth. Neither is it now thought to produce corpus luteal development as was once taught. Instead, it probably induces atretic processes in undeveloped follicles of the human ovaries. This would account for its great value in the treatment of metropathia hemorrhagica, or functional uterine hemorrhage accompanying endometrial hyperplasia in the absence of ovulation and corpus luteal formation.

This is the swiss cheese type of hyperplasia on which Dr. John Burch did original work. Though all such cases do not respond equally well to this therapy, yet good results are obtained in a large percentage.

Chorionic gonadotropic hormone is very satisfactorily used in cryptorchidism. Several potent chorionic gonadotropic hormone prepartions are on the market, all obtained from pregnancy urine except one (A.P.L.)

Commercial Preparations are listed in Table IV.

TABLE IV

Korotrin (formerly Antophysin) Winthrop supplied in powder in vacuum packed ampules and vials: Ampules contained 100 to 500 R. U. also in vials of 1000 R. U. and 5000 R. U.

Antuitrin-S (Parke Davis & Co.,) supplied in 10 cc. and 50 cc. vials of 100 R. U. to cc. and 500 R. U. to cc. in 10 cc. vials.

A. P. L. (Ayerst-McKenna & Harrison) an extract of Human Placenta, according to technique of Collip. Supplied in 10 cc. vials of 100, 500 and 1000 R. U. per cc.

Follutein (Squibb) supplied in a glycerine solution to be diluted with sterile distilled water in three sizes—500, 1000 and 5000 units.

In administering chorionic gonadotropic hormone it is well to remember that the dosage must be adapted to each individual. Where 100 R. U. every second day may give a response in one patient, another may require that the dosage be stepped up materially to as much as 1000 R. U. to the dose. This has been proven beyond doubt in undescended testes that responded to larger dosage after failing on the smaller dosage.

Estrogenic Hormones

Theelin or Estione C 18 H 24 O 2 or Hydroxy 17—Keto 1, 3, 5, Estratriene.

Theelol or Estriol C 18 H 24 O 3 or 3, 16, 17 Trihydroxy 1, 3, 5, Estratriene.

Emmenin is one of these.

Progynon-B.

Dihydrotheelin or Estradiol 3, 17 Dihydroxy, 1, 3, 5 Estratriene.

Equilene and Equilenin, these are as yet unimportant. All are sterols and related to the bile acids, particularly Cholesterol.

Through the work of Butenandt and Dodds, 1936 synthesis of the estrones began.

In 1938 Dodds, Goldberg, Lawson and Robinson synthesized a sterol group 4:4-dihyproxy-A: B-diethyl stilbene or diethylstilboesterol. This is better known to us as stilbesterol and is two and one-half times as potent as estrone when given by mouth. They can be manufactured cheaply and bid fair to revolutionize the use of estrone therapy.

Estrogenic hormones, these therapeutic agents, have taken their place, along with other eminently satisfactory specific hormones, such as pituitrin, suprarenin, insulin and thyroxin. Correctly used for proper indications, they have proven must valuable in several fields that were formerly most unsatisfactorily managed.

The most widespread use is found in relieving the vasomoter symptoms incident to the onset of menopause and other deficient estrogenic states.

In senile vaginitis it has been found to be a valuable agent. One must be warned that here, rather large doses are indicated, often to initiate a quick response.

In this connection atrophic rhinitis has been found to respond, miraculously, to estrogens.

Prolonged use of estrogens will develop the secondary sex characteristics in those patients who show primary developmental stigmata that can be traced to deficient anterior pituitary growth hormone or deficient ovaries. This is an interesting field within itself on which we could spend a full evening.

Small breasts respond to estrogens applied locally, but atrophy ensues when the therapy is discontinued.

Gonorrhoeal vulvo-vaginitis of infants and children responds to intramuscular injections, or daily suppositories of estrogens. The results, here, are obtained because of the ability of the estrogens to cornify the cuboidal epithelium of the infant's vagina and vulva, to an adult or squamous state of development on which the gonococci will not live. In children approaching the menarche, the uterus may be brought into a state of an ovulatory menses by large continued dosage, but on stopping the estrogens it will regress without harm.

Periodic premenstrual mastalgia responds very favorably to premenstrual dosage of estrogens. This is probably brought about by the action of the estrogenic hormone in developing the duct system. It is to be remembered that the glandular or acini system of the breast is developed and congested just premenstrual and prenatal through the effects of the corpus luteal hormones.

Clinically, estrogens have been recommended for a large number of conditions, some of which are oligomenorrhoea, migraine headaches, vomiting of pregnancy, toxemias of pregnancy, induction of labor, acne, hirsutism, frigidity, climacteric hypertension, etc. In this group, it might suffice to say that very indifferent results have been reported.

Fluman suggests in his monograph that many spontaneous recoveries may be accredited to the therapy, and that favorable influence often can be attributed to a psychotherapeutic effect.

We should be warned, therefore, not to get over-enthusiastic in our use of the estrogens and to limit their use to the recognized fields of usefulness.

Do not confuse migraine headache as mentioned here with the definite premenstrual headache that apparently does come from pituitary congestion. This type of headache is relieved by properly timed doses of estrogen.

CARCINOGENIC ACTIVITY OF ESTROGENS

Much has been said in recent discussions about the carcinogenic activity of estrogens. This has naturally followed experimental work in laboratory animals in which large doses of estrogens were administered over a long period of time.

Attention is called to the fact that certain coal tar derivatives containing the phenathrene nucleus as do the sex sterols; were known to be capable of producing carcinoma in experimental animals.

Cook & Doods; Lacassagne; Overholser & Allen and many others have done experimental work in this field.

Do not be frightened too much, however, by such discussions.

Remember that dosages used in producing carcinoma in experimental rats, mice and other laboratory animals were very large in comparison to the maximum dosages in woman. Also, Edgar Allen has observed that, "It must be made clear that the ovarian hormones are obviously not the only cause of female genital cancer, that estrogens normally are very important growth stimulators of female genital tissues and acting in high concentration, continuously, may produce atypical growth and are a determining factor in mammary and uterine cancer."

I, personally, have no fear of development of cancer in my menopausal or senile vulvitis cases, because we do not keep up large dosages over prolonged periods.

Many clinicians have no hesitancy in using estrogens for relief of post-radiation menopausal nervous symptoms in their pelvic and mammary cancer cases. I follow a rule never to administer estrogens in these cases as I desire to avoid any possibility of stimulating growth in a tissue that we are using every other means to destroy.

It is this thought of carcinogenic activity of stilbesterol that has kept it from recognition and sale to date. When we recognize that it has a two and one-half times greater potency than estrone and cut the dosage accordingly, then I believe it can be used with the same degree of safety as other animal glandular produced sterols.

Among the commercial prepartions of estrogenic hormones offered for intramuscular use are found in Table V.

TABLE V

Amniotin (Squibb) contains estrone from pregnant mares urine—supplied in ampules of 2000, 10,000 and 20,000 I. U. in oil.

Estrogenic Substance (Reed and Carnrick) from prenatal urine—supplied in ampules of 2,000 to 60,000 I. U. per cc. in oil.

Estrone (Abbott) from pregnant mares urine—supplied in ampules of 1000, 2000, 10,000 I. U. in oil.

Estrone (Eli Lilly) same as (Abbott).

Progynon-B (Schering Corp.) A benzoic acid estrone of estradial—prepared from pregnancy urine—supplied in ampules of 2500, 5000, 10,000, 50,000 I. U. in sesame oil.

Theelin (Parke Davis & Co.) is estrone from pregnancy urine—supplied in ampules 1000, 2000, 10,000 I. U. in oil.

Estrogenic Substances for Oral Use Are:

TABLE VI

Amniotin (Squibb) capsules containing 1000, 2000 I. U.

Emmenin (Ayerst McKenna & Harrison) as Estriol monoglucuronido from Human Placentae—Supplied as a liquid with a potency of 30 units per cc. and tablets of 120 (dayoral) units—½ to 2 drams daily doses.

Estriol (Abbott) from Pregnancy Urine Human—Supplied in capsules .06 mg. and .12 mg.

Estriol (Eli Lilly Co.) from Human Pregnancy Urine—Supplied in pluvules Estriol .06 mg. and .12 mg.

Progynon-DH (Schering Corp.) Estridol from Human Pregnancy Urine—Supplied in .75, .30, .90 mg. tablets.

Theelol (Parke Davis & Co.) from Human Pregnancy Urine—Supplied in sealed gelatin capsules .06 mg. and .12 mg.

Local suppositories are:—

TABLE VII

Amniotin Pessaries (Squibb)—Supplied in 1000 and 2000 I. U. sizes.

Estrone Suppositories (Eli Lilly Co.)—Supplied in 2000 I. U.

Progynon-DH Suppositories (Schering Corp.)—Supplied .0375 mg. — .375 mg. and for children .0375 mg.

Theelin Suppositories (Parke Davis & Co.)—Supplied in 2000 I. U. each.

Corpus Luteal Hormone has only recently been presented in pure crystalline form known officially as Progesterone.

Impotent Corpus Luteal Extracts have been on the market for several years.

Insufficient proven clinical data to date makes it very difficult to evaluate this, the newest addition to the Endocrine specific family.

It is optimistically advocated for use in chronic early abortion cases, but admittedly the dose must be large if results are expected, dosage up to 10 or 20 Rabbit units daily have been used with satisfactory results in my hands in threatened abortion cases within the past year.

Progesterone, also has been successfully used in bleeding fro mhypoplastic Endometrial tissue. It's use here is predicated upon anovulatory Endometrial bleeding in the absence of Corpus Lutum.

It's use in dysmenorrhoea has had indifferent results reported.

Among commercial preparations offered are found in Table VIII:—

TABLE VIII

Lipo Lutin (Parke Davis & Co.) Extracted from corpus lutea of swine—supplied in 1 cc. ampules of 1 and 2 Rabbit Units in oil.

Progestin (Eli Lilly & Co.) Alcoholic extract of corpora lutea in oil—supplied in ampules of 1 I. U.

Progestin (Upjohn) Extracted from fresh glands—supplied in 1 cc. ampules of 1 and 5 Corner Allen Units.

Proluton (Schering Corp.) from soy beans — supplied in 1 cc. ampules 1/5 I. U. 1. mg.—1 I. U. 2. mg. I. U. and 5. mg. I. U.

It is not surprising that a majority of this group should show a rather intense interest in the recent developments in the field of the male hormones.

As in the estrogenic deficiency syndromes in women, the deficiency of the testicular hormone, testosterone, in men may follow anterior pituitary gonadotropic failure or testicular deficiency.

Testosterone is a relatively new addition to the specific Endocrine family and though it has earned a definite permanent place in our armamentarium, I think we can truthfully say that it still is in an unsettled clinical state.

Much is being claimed for it in the enthusiasm of clinical trial.

As in the case of the estrogens, testosterone finds its greatest field of usefulness in substitution therapy, in impotence, due to ablation of the testes by injury, surgery, x-ray or in hypogonadism, due to congenital deficiency of either the anterior pituitary gonadotropic hormone or deficient testes.

Secondary sex characteristics of the male respond extremely well to testosterone in 25 to 50 mg. doses every second or third day.

Testosterone is being used very successfully in eunuchoidism to develop the secondary sex characteristics. Development of the penis, scrotum and pubic hair are rather quickly attained by proper timing of the dosage in young individuals.

Much has been said, but little actually known about the male climacteric and testosterone.

It might be suspected that the term male climacteric is often loosely used (correctly or incorrectly) to designate middle life impotence.

Again we are cautioned that testosterone is a potent hormone of the androgen group, that apparently corresponds in the male, to the estrone in the female. It has a depressing effect upon the anterior pituitary gonadotropic hormones. Thus, large doses may be deleterious in the end, rather than beneficially stimulating.

Testosterone has been used successfully in endometrial hyperplasia, with uterine hemorrhage. Here it probably acts as powerful androgen that depresses the anterior pituitary gonadotropic hormone secretion with resultant depression of ovarian follicular stimulation and secretion of estrogens that are continuously stimulating the endometrium.

Already, unwanted side reactions have been reported from its use in this field. Husky voices and hirsutism have been stimulated in some of these cases from prolonged large dosage.

The average dosage is 200 to 500 mg. given in divided dosage over a period of one month.

We have refrained from mentioning many things that could take up a whole evening such as dysmenorrhoea, pituitary syndromes, primary and secondary amenorrhoea, growth and lactogenic hormones, etc.

We have only hoped to mention a few rather definite clinical uses for these new though potent and efficient therapeutic agents, so that we can separate these definite syndromes and uses from that larger, more varied group in which varied and indifferent results can only be expected.

Endocrinology and hormonology is not for specialism.

In modest respects it should be a part of every clinician's armamentarium. But I do make a plea that we use it intelligently, carefully and respectfully.

The Indications, Results and Reasons for Use of the Different Types of Skin Grafts*

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Any subject which deals with skin grafting is usually of interest to every practitioner of medicine, as well as to the specialist in the field of plastic and reconstructive surgery. The indications for and the applicability of the various types of skin grafts are so universal that a working knowledge of their use may be regarded as indispensable. Once the underlying principles involved in the transplantation of skin are understood, the actual operative technique can readily be mastered. In many instances no special equipment is necessary other than that available in a well organized general hospital. It thus becomes the duty of every practitioner to familiarize himself with the indications, use and possibility of results in this field of endeavor. In the discussion to follow the multiplicity of uses and the results obtained from the use of the various types of skin grafts will be presented.

The material for study and the illustrations used to demonstrate the various conditions in which skin grafting is indicated are taken from the files of our clinic** and comprises a study of several hundred cases operated during the past ten years.

Types of Skin Grafts: There are six types of skin grafts which may be considered to be in general use at the present time. They are:

1. Pinch graft.
2. Seed graft.
3. Oliver-Thiersch graft.
4. Split thickness graft.
5. Full thickness graft.
6. Pedicle flap graft.

The pinch graft, as usually employed, is a small bit of tissue including the epidermis and a portion of the dermis. The primary contraction in this type of graft is not great and the secondary contraction of the graft itself is negligible. However, the contracture of the scar tissue epithelium which bridges the gap between each island of transplanted skin is extremely great and is at times deforming, particularly when it overlies a joint. The use of this type of graft for any purpose whatsoever is fast, and correctly so, falling into disrepute. The donor area (Fig. 1) is, as every one well knows, quite unsightly and the end result of the grafted area is no better and may even be worse. The functional and cosmetic result which is attained by the use of the pinch graft is in no way comparable to the results obtained by using the other types of grafts. The high percentage of "takes" of a pinch graft is truly its only redeeming feature. The authors strongly believe that the pinch graft does not have and should not have any place in the treatment of lesions requiring skin grafting.

The seed graft is in reality a small pinch graft but deserves a separate classification because of its manner of use. It is used particularly in granulating areas around the rectum which cannot be sufficiently prepared for grafting. In these cases, if a seed graft is implanted into the depth of the granulation tissue it will often be surprising how they will grow and epithelize to such an extent as to produce a quite satisfactory final result.

The Oliver-Thiersch graft is a type of graft which supposedly is cut through the papillary layer of the epidermis and is therefore a very thin graft. Anyone who has cut skin grafts, made cross sections of these grafts and studied them microscopically, readily realizes that it is a practical impossibility to cut a graft of such thinness. (Fig. 2) The thinnest graft of any worthwhile size possible to cut will always contain a varying amount of the dermis. Because of the fact that an Oliver-Thiersch graft is in reality a thin split thickness graft, its characteristics will be considered under that heading.

The split thickness graft is cut with a large razor-edged knife. It is of such a thickness that it splits the dermis at varying depths, dependent on the desire and ability of the operator. (Fig. 3) On the thickness

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of this type of graft will depend its degree of contractibility; i.e., the thicker the graft the more elastic fibers it will contain and thus the more primary shrinkage. However, the thinner the graft, the more will be the all-important secondary contractility. The average split graft may be considered to have a secondary contractility of less than 15 per cent. The main advantages in the use of a split graft are that a large defect may be covered at one operation. As much as 300 sq. inches of skin has been successfully grafted at one procedure using this type of graft. The cosmetic results are usually quite satisfactory and the functional results are excellent. With cognizance of a few exceptions, the split graft may be said to be the skin graft of universal applicability. The thicker the graft is cut the more normal in final appearance will the grafted area become. Another fact worthy of note is that if this graft is properly used the percentage of "takes" should be well over 90 per cent. With the exception of the pinch graft, it is the only type of graft which can be relied upon in the covering of a granulating wound. A great advantage in the use of the split graft is that the donor area readily heals spontaneously and that as many as four "crops" of skin may be cut from the same donor site. Except where there is deep loss of soft tissue, or exposure of bone, joints or tendons, the split graft is the graft of choice.

The full thickness graft is, as the name implies, cut so as to include all the layers of the skin. (Fig. 4) This graft is difficult to use successfully because of its relative uncertainty of "take." It is almost impossible to transplant this type of graft to a granulating area. A full thickness graft usually may be considered to have a primary contractile characteristic of about 40 per cent and practically little or no secondary contractility. The most important consideration in the use of this type of graft is found in the fact that the successful end result most nearly resembles the replaced skin as regards cosmetic appearance. This is of paramount importance in the repair of certain facial defects. Because of the thickness of this graft it will withstand trauma relatively well; thus, its not infrequent use for grafting hands and weight bearing areas is quite justifiable. A rather important disadvantage in the use of the full thickness graft is found in the fact that the donor site requires special surgical treatment in order to insure primary healing and because of the limitations of this, the amount of full thickness skin which may be removed from any given area is relatively small.

The pedicle flap graft is in truth a full thickness graft plus a layer of attached adipose tissue; thus, it really is a skin-fat transplant. The pedicle flap graft is not a free transplant as it always carries with it its own blood supply. There are several types of pedicle flap grafts; namely, island grafts, tubed flaps, uni- and bi-pedicle flaps. The contractibility of the pedicle flap grafts is usually considered to be about 25 per cent. The main advantage of a pedicle flap graft of any type is its thickness. Its use is limited to areas in which there is deep loss of soft tissues, exposure of bone, joints or tendons, and in the reconstruction of body features such as a nose or ear. This type of graft is difficult of management but its use in specific cases is quite indispensable.

Assuming that we have for consideration a patient for whom skin grafting is indicated the question naturally arises as to which type of graft is the most suitable. The selection must be made on the basis of a consideration of the functional and cosmetic result, the likelihood of a complete take of the graft, the ability of the individual surgeon and the various economical factors involved. We may consider the pinch graft only to condemn its use. The seed graft as before mentioned has in truth only one indication for its use and that is in a granulating area that can not be sufficiently prepared for more satisfactory grafting. The pedicle flap graft is of use only in cases in which a deep loss of soft tissue is to be repaired or in cases requiring restoration of a body feature. The full thickness graft is to be employed in certain cases of facial defects requiring skin replacement and in those cases in which tendon or joints are exposed without associated great loss of soft tissue. The split graft thus becomes the skin graft of choice in all cases of granulating wounds, operative defects due to opening up of old scar contractures and in all skin defects except in those cases peculiarly adapted to the use of the full thickness and/or pedicle flap graft.

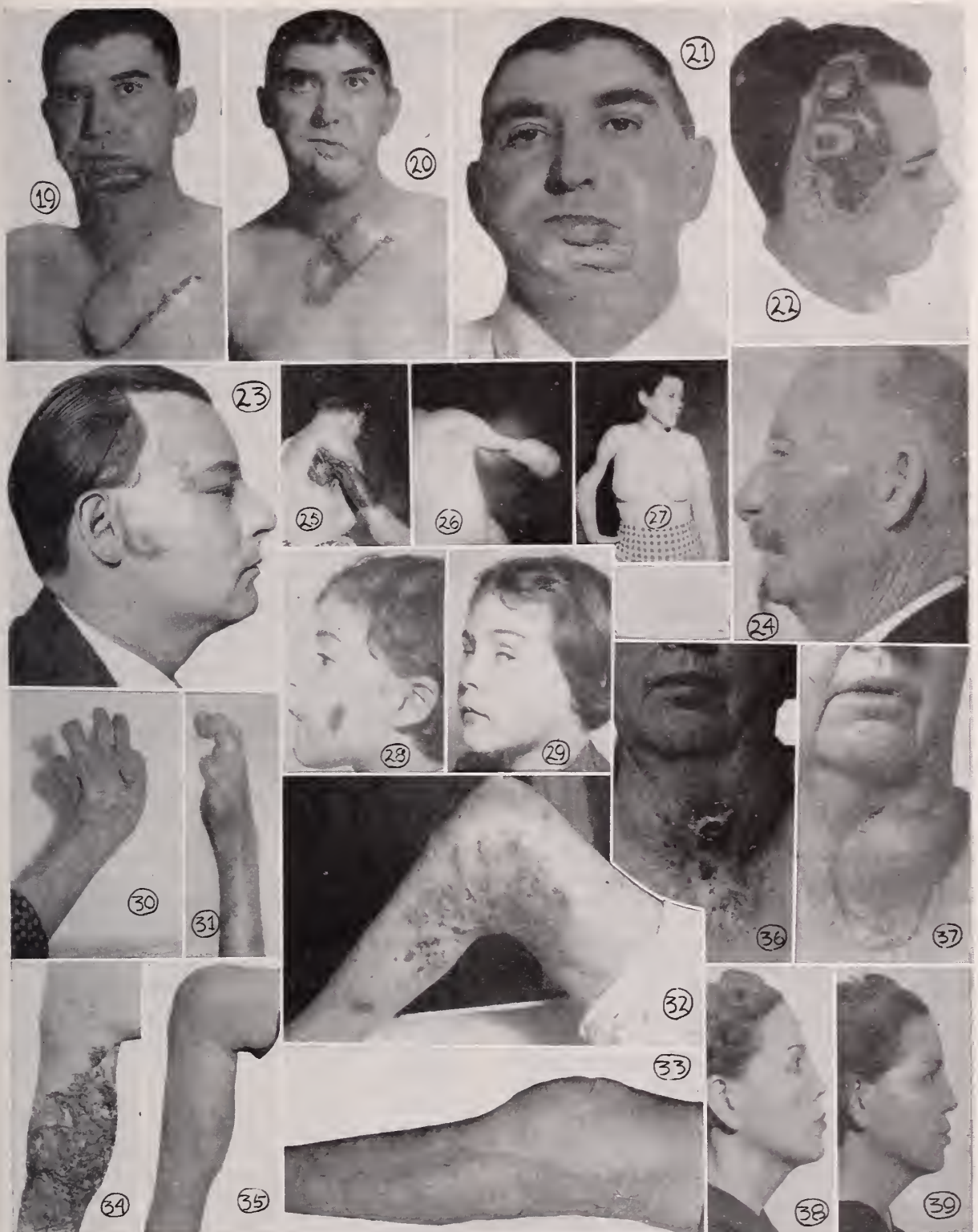
The following classification of the various indications for skin grafting is entirely an arbitrary classification; however, it briefly presents and well demonstrates the diversity of indications for the use of a skin graft.

INDICATIONS FOR SKIN GRAFTING

I. Replacement for acute skin loss by:
 1. Burns
 2. Accidental trauma
 a. Skin loss only
 b. Associated loss of soft tissue with or without exposure of bone, joints or tendons.
 3. Post operative skin defects.
 4. Acute necrotizing infections.



1. (After Brown) Shows the unsightliness of both the donor and the recipient area when a pinch graft is used. 2. (After Maximow) Cross section of skin; the area between the arrows is the depth at which a true Oliver-Thiersch graft theoretically would be cut. 3. (After Padgett) Photomicrograph of a thin (upper) and a medium thick (lower) split thickness graft. Note that even in the thin graft the cut is considerably deeper than the papillary layer. 4. (After Padgett) Photomicrographs of a moderately thick (upper) split graft and a nearly full thickness (lower) skin graft. 5. Old ulcer on popliteal space of 17 years duration, the result of a burn in childhood. 6. Lateral view of same patient as in Fig. 5 to show the slight flexion deformity. 7. Photograph of the Padgett calibrated dermatome with the equipment necessary for its use. (The reader is referred to Padgett's original article for the details of technique in the use of this instrument.) 8. The drum has been placed on the previously prepared abdomen and cutting of the graft of .0018 inch thickness has begun. 9. The completion of the cutting of the graft from the abdomen. 10. Shows the graft after having been removed from the drum. 11. Graft sutured in place. (Mattress sutures throughout the graft are yet to be placed). 12. Posterior view to show the result one month after grafting. 13. Lateral view of result one month after grafting. 14 & 15. Granulating area, the result of a fire burn one month previous. 16. Final result six months later, 2200cm. of skin were grafted in four operations. 17. Traumatic avulsion of a portion of the skin and soft tissue of the buttocks. 18. The wound was allowed to granulate in and a split graft applied. Functional result is excellent.



19. Traumatic avulsion of a portion of the skin, soft tissue and bone, the result of an auto accident. Chest flap may be seen outlined. 20. Chest flap is in place and remainder returned to its bed. 21. Final result—Patient refused to have a trimming operation performed stating that he was well satisfied with the present result. 22. Granulating area of face the result of loss of skin following an auto accident. 23. Split grafts to cover the granulating base and later full thickness grafts were used in order to obtain the final end result. 24. Shows a case in which a forehead flap has been used in restoration of a complete nose. The defect produced by the forehead flap was grafted with a split graft. 25. Granulating area, the result of an acute fulminating necrotizing infection, following the administration of an unsterile hypodermic. (Case from the records of Barnes Hospital, St. Louis, Mo.) 26 & 27. Result obtained using the split graft. This was necessary before any orthopedic procedure could be considered. (Case taken from the records of the Plastic Service of Barnes Hospital, St. Louis, Mo.) 28. Disfiguring hairy mole on face. 29. Result obtained using a split graft. Photograph taken on 10th P. O. day. 30. Long standing contracture of wrist and fingers. 31. Release of contracture at wrist in one operation using the split graft. A secondary operation will be necessary to restore function in the fingers. 32. Bad flexion deformity of the knee (old burn). 33. Restoration of complete function of the knee using the split graft. 34. Chronic leg ulcer of two year duration. 35. Complete healing upon resort to skin grafting. 36. Post radiation ulceration of long standing. 37. Healing of the ulcer by skin grafting. 38. Traumatic nasal deformity in which there was deficiency of nasal lining. 39. End result of repair in which split grafts to inner nostrils was a major necessity for a successful result.

II. In the cosmetic repair of blemishes such as:
 1. Oil or "tattoo" marks.
 2. Birth marks, e. g., moles and port wine stains.

III. Replacement of skin deficiency following the operative release of old contractures.

IV. In the surgical treatment of chronic leg ulcers.

V. In the surgical treatment of post radiation burns.

VI. Replacement for deficiency or loss of mucus membrane.

VII. Restoration of an organ such as the ear or nose.

Since the split graft is the graft most commonly employed, a word or two concerning the details of technique of its use are in order. For the past several months we have been using the Padgett calibrated dermatome as the instrument of choice for the excision of the split thickness skin graft. Figures 5 to 13 with their accompanying legends show a recent case in which this instrument was employed. The main advantages of this instrument are mainly two; one, a graft of predetermined uniform thickness may be obtained with certainty, and two, grafts of a worthwhile size may be cut from otherwise unaccessible areas such as the skin of the abdomen or over the ribs. The disadvantages are that it is a mechanical "gadget" and as such is not fool-proof; thus, if it is used by the inexperienced it may lead to disappointment and disaster. In our hands we have found it difficult to cut a thin split graft with this instrument and therefore, where such a graft has been desired, we have resorted to the familiar Blair skin graft equipment.

The indications for the use of and the results obtained in the use of skin grafts as exemplified in the following case history summaries well demonstrates the importance of a working knowledge of this subject.

Perhaps the use of the skin graft as replacement for acute skin loss by whatever cause, is its most important use; certainly it is the most important as regards its usefulness in conservation of life. No one now denies that the use of the skin graft in a badly burned patient has meant not only a saving of life, but has also made possible a great economic saving in that it rehabilitates the patient in the shortest period of time with the best functional results. The preservation of life as well as the early restoration of function is best accomplished by the early use of skin grafting.

Case I (Fig. 14, 15, and 16). An 18-year-old male sustained third degree fire burns of both lower extremities. In four operations 2200 sq. cm. of skin was transplanted using the split-thickness graft as the graft of choice. In less than eight months from the date of this accident this boy is now completely healed, has no foot drop or flexion contractures and is up and about without the aid of a crutch or cane.

In the patient with skin loss due to accidental trauma the immediate use or, in some cases, the delayed use of skin grafting is quite important and almost a necessity in the successful management of these individuals. The choice, as regards the type of skin graft indicated, is dependent almost entirely on the amount of associated soft tissue loss.

Case II (Fig. 17 and 18). This 22-year-old common laborer was caught in the spokes of a cog wheel with resulting avulsion of the skin and part of the soft tissue of the buttocks. Immediate debridement followed by primary suture was attempted elsewhere in another state, but when we saw the patient three months later, there still was no attempt at healing except for some dirty infected granulation tissue in the depth of the wound. The first step in the treatment of this individual was to release the sutures, open up the wound and allow it to granulate in from the base. When this was accomplished a split graft was successfully applied. The functional result in this case is highly satisfactory and his compensation disability rating is less than five per cent.

Case III (Fig. 19, 29, and 21). This man had a loss of the skin, soft tissues and a portion of bone in the region of the chin. In order to heal this wound satisfactorily and at the same time restore approximately normal contour, a pedicle flap graft was used. This man was advised to return for a minor operative procedure so as to further improve the cosmetic appearance but he declined, stating that he was well-satisfied with the result.

Case IV (Fig. 22 and 23). This patient received a wound involving the face and scalp in which there was considerable loss of skin and subcutaneous tissue. Split grafts were used to cover over the granulating area and later full thickness grafts were substituted so as to obtain the final cosmetic appearance.

Skin defects produced by operation, for example, the defect following a radical breast operation, or the defect remaining from the use of a pedicle flap graft, can be very satisfactorily repaired by the immediate use of the split graft without too great a prolongation of the operative time or ex-

cessive increase in operative risk. The desirability of having such a defect remedied at the initial operation is self-evident.

The restoration of an organ, namely, the nose or the ear is impossible of accomplishment without the use of a skin graft. For the purpose of restoration of either the nose or the ear, the pedicle flap graft is the graft of choice because it has thickness and thus can be "molded."

Case V (Fig. 24). This 72-year-old male had a destructive epithelioma of his nose. Cauterization of the growth was necessary for its eradication. The restoration of the nose was accomplished by the use of a forehead pedicle flap graft. The defect produced by the pedicle graft was repaired using a split graft.

There are some fulminating necrotizing infections that destroy considerable areas of skin. After the acute infection has subsided the resultant defect must be corrected. The use of the split thickness graft is quite effective in covering over such a granulating defect as this would necessarily be.

Case VI (Fig. 25, 26, and 27). This young woman was the unfortunate victim of an acute necrotizing infection following the administration of an unsterile hypodermic. Before any orthopedic work could be considered the raw areas had to be covered. Split grafts were used with complete success.

Another important use for skin grafting is in the eradication of blemishes produced by moles, oil or "tattoo" marks and birth marks of various types. It is not entirely true that this indication is wholly a cosmetic one, but one may be assured that by the successful removal and repair of these blemishes the personal appearance and happiness of the individual will be greatly enhanced.

Case VII (Fig. 28 and 29). A young girl with a hairy mole on her face. A thick split thickness graft was used to repair the defect after the excision of the mole. A full thickness graft might well have been used in this instance; however, the uncertainty of securing a complete take in a child of this age prompted the use of the split graft in preference to the full thickness graft.

Following the release of old contractures the resultant skin defect is often astonishingly large. The use of skin grafting in these instances affords one the opportunity of restoring function to an otherwise useless or greatly functionally impaired extremity.

Case VIII (Fig. 30 and 31). A case showing extensive contracture of the hand of long standing. Restoration of the important function of flexion at the wrist was obtained in one operation using the split graft. A subsequent operation will be necessary to restore function to the fingers.

Case IX (Fig. 32 and 33). This case illustrates a contracture over an important joint with resultant practical complete loss of function of the involved extremity. Upon release of the contracture, the large skin defect was successfully covered using the split graft. This man is at present an oil field worker and is having no difficulty with this extremity whatsoever. Apparently the split grafts are withstanding the trauma of weight bearing and continued use of the knee joint quite satisfactorily.

The use of skin grafts in the surgical treatment of chronic leg ulcers is not generally appreciated. Chronic leg ulcers are so readily amenable to complete cure by the use of skin grafting that it seems unjust to permit such a patient to continue for years using local remedies of salves, bandages, etc., yet no doubt there are countless numbers of these patients under a physician's care at the present time. Regardless of the etiology of the leg ulcer, its duration or size, it can in almost 100 per cent of cases be permanently cured by the use of a skin graft. Because the ulcers are dirty granulating wounds, the split graft has been found to be the only graft which can be employed with assurance of a "take" and a satisfactory functional result.

Case X (Fig. 34 and 35). This is a 40-year-old male with a chronic leg ulcer of over five years' duration. By one operation he was completely healed and has now remained so for a period of over three years without any evidence of a recurrence. It is noteworthy that he is doing hard manual labor.

Post radiation burns, while not as common as in the past, are still of such frequent occurrence that their therapy demands consideration. With the increase in knowledge applicable to the use of x-ray and radium this lesion will no doubt decrease in frequency. For the successful permanent cure of a post radiation burn of long standing the entire skin thickness of the involved area must be excised. Because of its greater certainty of take the split graft is preferable in the repair of these defects.

Case XI (Fig. 36 and 37). The post radiation burn in this instance was the result of excessive therapy in the treatment of an epithelioma. The ulcer had been present for over three years. The permanent cure of this condition was obtained in one operation by the use of split-thickness graft.

An infrequent use of skin graft, but nevertheless an indispensable one, is its use in

cases requiring replacement for loss or deficiency of mucus membrane. The main examples of this are to be found in the cases in which there is deficiency of oral, nasal or orbital lining. The split graft is practically the only type of skin graft that is certain of take and technically possible to use in these localities.

Case XII (Fig. 38 and 39). In order to restore normal contour to this post traumatic deformity of the nose, a replacement of the deficiency in nasal lining was necessary. A split graft was used with quite evident success.

SUMMARY

To briefly summarize, it may be said that it is quite evident how important the use of the skin graft has become. A knowledge of the uses and use of the various types of skin grafts is essential if we are to afford the patient the best that present day surgery has to offer. The medical profession, and the laity as well, owe a great debt to the men who have been the pioneers in this field of endeavor.

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Thyroid Disease*

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For many years, a great deal of research work has been done by many authorities on the problems presented by the thyroid gland. Conclusions drawn from this work, though in many cases not based on proven facts, have established some truths that cannot be questioned.

The etiology of goiter problems has also been studied with its grouping as to geographical occurrence, heredity, maternal influence, and to the prophylaxis. Classifications have been made by the pathologist, the physiologist, and the clinician, each classifying the condition as to his personal viewpoints. But none of these have been satisfactory from all angles. However, in this paper, and for the man on the firing line, the patient, we might well use the simple classification of toxic and non-toxic goiter.

The thyroid gland does not act alone, but holds an important place in a complicated system of glands of internal secretion. A system as compared to the other systems of the body is little understood. Due to this fact, it is not hard to imagine a disturbance of the gland may upset the entire system, and a variation of symptoms results. Thus, the diagnosis "Atypical Goiter" is frequently made.

The symptoms of goiter vary, depending on the individual and the severity of the disease, some of which are presented by all goiterous patients, but seldom do we see a patient with all of them. In non-toxic goiter, we see an enlargement of the thyroid gland, usually with an absence of other symptoms, unless a choking sensation and dyspnea are present due to pressure from the enlarged gland. In the toxic goiter, the symptoms vary from mild to the extreme. In the mild case, the predominant symptom is often nervousness. We could hardly imagine a goiter without some type of nervousness. He may also complain of general weakness and of weakness of his legs, and of easy fatigue. Examination of this early case is often negative, except for a slight increase in the pulse rate, and some elevation in blood pressure. The metalobic rate may be normal. If such a case is left untreated over a period of time, these symptoms will increase in severity, and other symptoms will appear. He may then complain of restlessness, and that the night's rest does no good. If anything, he feels

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worse in the morning than before going to bed. A choking sensation appears, a feeling of exhaustion and shortness of breath on climbing stairs or other slight exertion. The appetite is good, often better than normal, in spite of a gradual loss of weight. At this time, the metabolic rate is usually increased. In the advanced case of toxic goiter, the exophthalmic goiter, a diagnosis is as a rule not hard to make. It is manifest by a marked increase in pulse rate, as well as increase in blood pressure. Complaints of shortness of breath, along with extreme muscular weakness are forthcoming. A fine tremor of the fingers of the outstretched hand, forcible throbbing of the arteries, flushing of the skin, and usually an increase in perspiration is noted. Some enlargement of the thyroid gland is often associated with anemia and emaciation. Bulging of the eyes, exophthalmia, and puffiness of the lids, gives the patient the appearance of being anxious or scared. An increase in the metabolic rate is always present in this type of case. Interpretation of the symptomatology of advanced hyperthyroidism or thyro-toxicosis is easy of accomplishment. The mild or atypical goiter, however, may tax the skill and judgment of the best diagnostician.

In addition to the history and physical findings, we have two important tests to help in the diagnosis of these cases—the basal metabolism and the Goetsch Test. Neither of these tests, however, are 100 per cent diagnostic. They should be considered only as confirmatory tests.

The basal metabolic rate has been accepted as our most accurate information in confirmation of a diagnosis. But we must remember that the findings from this test do not always run parallel to the toxicity, and can not be take as absolute. We occasionally see a case with definite signs and symptoms of hyperthyroidism, but with a normal or, in some cases, a minus metabolic rate. For this we have definite reasons.

1. It may be due to congenital defective glands.
2. It may be due to past disease, as inflammation, with resulting destruction and pressure.
3. It may be due to hypersensitization of a body tissue to a minimum amount of thyroid secretion.
4. Since 1930, Herzfeld of Berlin and Blum of Frankfort, have been working with a substance isolated from the blood, which they call "Catechin." They find that this is a hormone in the blood which is antagonistic to the substance in the thyroid, causing an increase in the metabolic rate, but which does not prevent toxic symptoms. It is their opinion that an overproduction of this substance may be responsible for the minus metabolic rates found in many goiter patients.

It is also possible to get a plus metabolic rate in a non-goiterous patient. This may be due to a neuresthenic patient, faulty apparatus, improper preparation of the patient for the test, or to faulty technique. For this reason, especially if the rate does not coincide with the symptomatology, the test should be repeated.

The Goetsch test is a most valuable test and should be in more common use. It should be used in all borderline cases, and its value considered with other signs and symptoms. In eighty per cent of cases, this test is confirmatory; it is many times suggestive and can be used in coming to a conclusion in indefinite cases, when the metabolic rate cannot be taken, or is not satisfactory. This test consists in the sub-cutaneous administration of eight minims of 1-1000 adrenalin. The patient should then be observed as to pulse, blood pressure and respiration for one and a half hours. These should be checked every five minutes fo rthe first hour and every ten minutes for the second hour. In a positive reaction, there is an early rise in blood pressure of ten to twenty points, and an increase in the pulse rate of twenty to fifty points. In thirty to thirty-five minutes there is a moderate fall followed by slight secondary rise and a second fall to normal in about one and a half hours. An increase in nervousness and magnification of other symptoms may also be noted during this period. In a negative reaction, only a slight rise in blood pressure and pulse rate are noted, and this returns to normal in about ten to fifteen minutes.

The management of the goiter patient depends again on the type and stage of the disease. His treatment is both medical and surgical. It is not the purpose of this paper to discuss the surgical treatment of goiter, but regardless of our stand, we must admit that the surgical method has its indications. It is generally understood that adenomata of the thyroid do not spontaneously disappear, and that when thyrotoxicosis develops in an individual, surgery is the method of choice, if ultimate cure is to be achieved.

Every patient with a goiter, be it toxic or non-toxic, hyperplastic or adenomatous, has a problem on his hands. It should be determined definitely the type and stage of the disease before any type of treatment is instituted. If a patient develops a goiter in early life and lives to expectancy, he will probably at some time during his life develop symptoms and disabilities that can be def-

initely attributed to the thyroid gland. So it might well be said that all goiters are potentially dangerous.

The non-toxic adenomata is essentially a surgical condition. If treated medically, iodine should not be included, since its administration may activate the gland and the disastrous result of toxic adenomata result. Iodine then should in the great majority of cases be held for the pre- or post-operative treatment of toxic goiter.

The medical treatment is the type most employed, yet we know least about the results. It consists of instituting a period of complete rest and full feeding, to be followed by a return to as near full activities as can be accomplished. The employment of sedatives is nearly always necessary, at least in the beginning. The bromides or some of the barbital derivatives may be given three times a day for their general quieting effect. Experience teaches that the best effects are derived from the alternation of sedative drugs. Full feeding in these cases means simply giving the patient all he will eat. Usually the appetite is ravenous in the beginning and is best satisfied by numerous small feedings between the three full meals. Under careful medical treatment the subjective symptoms markedly recede, the pulse rate gradually falls and the metabolic rate becomes more normal. When we feel that no more can be accomplished by absolute rest, an attempt is made to slowly return the individual to his former economic status. It is freely admitted that in the majority of cases treated in this way a full rehabilitation is not accomplished and, due to this fact, many of these patients are later candidates for surgery.

Pre-operative care of the goiter patient is also a medical problem. In this case, in addition to the bed rest, full diet and necessary sedatives, is the use of iodine, usually in the form of Lugols solution. The dosage of this drug depends on the case, the stage of the disease, the duration, the age of the patient and whether the patient has had iodine before or not. The prompt and proper administration of iodine to the toxic goiter will beyond a question give relief from symptoms of the toxicity and in the more toxic, exophthalmic goiter is a life-saving procedure. Special consideration must be given to any other pathological condition. In almost every medical journal is a paper on the management of goiter in the presence of some pathological condition, which in itself speaks for the magnitude of this problem. Home treatment is most often used in the pre-operative care, because it is necessarliy continuous over a long length of time. The fear and anxiety that accompanies hospitalization may often, at least for a time, tend to make some patients worse. When the proper environment and care cannot be had in the home, then the interest of the patient will best be conserved in the hospital.

As to medication, iodine and bromides or some other sedative as needed for nervousness are usually all that are needed. Digitalis may be indicated if heart symptoms are prominent. Iodine may be given to all goiters regardless of the type in the pre-operative care. In the very sick, large doses need not be feared. Sixty minims per day for a ten-day period are safe and satisfactory when indicated.

The fluid intake must be abundant in these cases, since their requirements are much higher than normal. The diet is important because of the high metabolic rate. Their caloric intake should be high and a maximum food intake should be encouraged. The response to this outline of treatment depends on the age and condition of the patient, the duration and intensity of the disease, the state of the thyroid at the time and whether the patient has taken iodine previously. When his condition and findings approach normal, he is ready for an operative procedure. There are two schools of thought regarding the surgery of this gland. It is often the opinion of the surgeon that surgical treatment is indicated whenever a diagnosis is made. From the internist viewpoint the treatment should be more conservative and only selected cases should be operated. It has been shown that the ultimate and, in some cases, the immediate response, has been as good in medical as in surgically treated cases. It is also true that the majority of cases treated surgically again become medical cases and their care may extend over quite a long period of time. Statistics are lacking in the results of both the medically and surgically treated cases, and in most cases have been followed for a period of only a few months.

In the post-operative treatment of most simple goiters, little needs to be done. Usually small doses of iodine will prevent symptoms of toxicosis. These patients, aside from the soreness in the neck, have few complaints, and a rapid subsidence of most of the symptoms follows immediately upon the operation. They are able to take water and soft foods from the second day of the operation, and on the eighth or tenth day are able to leave the hospital, free from symptoms, and after a few weeks' rest are able to resume their regular place in life. In the more toxic cases, severe reactions may occur, consisting in a severe exacerbation of all of the symptoms. The metabolism, fever, pulse rate and blood pressure may rise very high,

nausea and vomiting associated with excitement and restlessness may occur. Fortunately the administration of iodine through the post-operative period has greatly reduced the frequency of such a crisis. If such a reaction occurs, iodine must be continued in large doses. Dehydration and acidosis can often be counteracted by hypodermoclysis of saline and the intravenous administration of glucose solution. The excitement and restlessness may be controlled by morphine or some other sedative in as large a dose as is necessary. This type of patient will necessarily be hospitalized over a longer length of time and the ultimate result of his treatment will be slow to obtain and possibly disappointing to all concerned.

Regardless of the method of treatment employed on the goiter patient, his progress should be observed over a period of at least five years. It is a proven fact that no single treatment is satisfactory for all types of goiters and some cases seem to defy treatment of any kind.

I have attempted in this paper, to review thyroid disease from a practical standpoint to the practicing physician, without going into detail, and from it will conclude:

1. That the thyroid gland is not an entity in itself but is a part of a system of glands of internal secretion.

2. Symptoms of goiter vary in degree, depending on the severity of the disease and when mild or atypical may present a difficult problem, both as to diagnosis and treatment.

3. The basal metabolic rate and the Goetsch test, while very accurate and great in value, are not diagnostic, but are a diagnostic aid to be used in conjunction with other findings.

4. In goiter, the type and severity of the disease should be determined before any treatment is instituted.

5. The patient with non-toxic should not be given iodine therapy, because of the possibility of activating the gland, with a resulting toxic adenomata.

6. The methods of treatment now in use are medical, surgical and abolition of the gland with x-ray, all of which have their advocates.

DISCUSSION

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Thyroid Disease

The essayist's subject, "Thyroid Disease," is a very interesting and important one but of such magnitude and with a literature so voluminous that no one could hope to do more than touch upon the many important points involved in the brief time allotted to the author of this paper.

The B.M.R. furnishes an important bit of the evidence which goes to make up the final diagnosis of thyrotoxicosis. Another point of some importance in the diagnosis is a fairly constant relative hypertension with an increase in pulse pressure. Of very great significance are marked loss of weight and strength and marked gastrointestinal symptoms. These, especially if associated with a persistent marked tachycardia, should always make us realize that thyroidectomy upon such a patient will be attended by considerable risk. The pre-operative preparation of these patients should be very thorough and the surgeon should consider the advisability of stage procedures.

Physicians and surgeons throughout the world with the widest experience in the treatment of thyrotoxicosis have for many years taught and demonstrated that the quickest, most certain and most permanent relief for this disease is obtained by resection of the thyroid gland.

In his treatment of goiter the surgeon will be concerned chiefly with the following types: first, the patient with adenomatous goiter; second, the patient with hyperthyroidism; and third, the patient with adenomatous goiter and hyperplasia.

In the nodular goiter resection is indicated to prevent or relieve one or more of the following conditions—deformity, pressure, toxic effect, especially upon the heart and liver, and malignancy. Since 90 to 95 per cent of thyroid malignancy occurs in adenomata, the indication for removal of such lesions, without undue delay, is clear.

In the patient with toxic diffuse goiter resection is indicated for the relief of the numerous signs and symptoms associated with hyperthyroidism.

Adequate pre-operative preparation is especially important in the patient with hyperthyroidism, and in this connection I should like to emphasize the well-known but oft' neglected fact that Lugol's solution need not and should not be given except as part of the pre-operative and post-operative treatment of patients with toxic goiter.

Regardless of the claim of some surgeons that they are doing total thyroidectomies in practically all toxic goiters, I feel that most experienced surgeons will continue to do a reasonably radical subtotal resection rather than a so-called total removal—for obvious reasons.

In difficult or very toxic goiters a comparatively light anesthesia with one of the standard gases given alone or with ether through an intratracheal catheter is very satisfactory.

There is still a definite indication for a graded operative procedure in certain cases.

In the post-operative care of toxic goiter patients, medicated steam appears to be of considerable value in relieving the discomfort associated with accumulation of tenacious mucus in the trachea and bronchial tree.

The administration of adequate amounts of glucose and Lugol's solution intravenously during the first few post-operative days helps to maintain a satisfactory control of toxic symptoms as well as to supply the patient with the proper nutritional and fluid requirements.

The post-operative use of oxygen helps to control toxic symptoms and to prevent or relieve the development of post-operative pulmonary complications. It also appears to prevent or relieve the accumulation of excessive secretions in the trachea and bronchial tree.

Horseshoe Kidney*

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Fused kidney is not a sufficient novelty to justify the report of a single case. Nothing new has been discovered recently on the subject. My excuse for reporting a case is that it is fairly typical of horseshoe kidney with reference to history, findings, pyelograms, etc. Furthermore it serves to bring out many of the pertinent points relative to the obscurity of the symptoms and the ease with which it can be overlooked, even after some study, and it also illustrates the ease with which the diagnosis can be made once it has been thought of. The disease has been known since antiquity and much has been written about it. The literature prior to the advent of modern urological diagnosis is now only of academic interest, for no one could be so rash as to attempt to diagnose and treat a fused kidney without the aid of pyelography.

While the disease is fairly common, it still remains that an individual in private practice will probably see a very few cases in the course of his practice and it is likewise quite probable that practically every physician will see, if he is alert, one or more such cases. The incidence of known occurrence of this mal-formation has been increased from one-tenth of one per cent to one-half of one per cent, as computed by various authors since the advent of pyelography. In visiting with a considerable number of average physicians, I find that many have been in practice for years without ever having seen or suspected a case, which means perhaps that they have been overlooked.

My purpose, then, is to call attention to the subject again and to emphasize the necessity for a thorough urological examination wherever there is not only urological symptoms that are unexplained, but also any vague gastro-intestinal complaint. Furthermore, it is the part of wisdom to make this urological study before unwise and dangerous laparotomies have been resorted to. Many excellent papers, some of which are referred to in the bibliography, have been published which go into the embryology and anatomy of the subject and will not be discussed here.

The symptoms, while vague, do follow a fairly general course and are in the main about the same as reported by various authors. There are many cases, in fact, the majority, which do not have symptoms at all. It has been generally stated that the horseshoe kidney does not produce symptoms at all unless there is concomitant pathology; that is, unless the organ is infected, obstructed or contains stones or tumors. Guiterrez says that the position of the fused kidney itself produces symptoms, that even when the patient does not complain, in the majority of the cases there is evidence of nephritis found especially at autopsy and he insists that the anomaly should be called "horseshoe kidney disease." The symptoms in the absence of associated pathology are due to the pressure of the isthmus on the adjacent nerve plexuses and the disturbance in circulation. The symptoms of pressure would rarely be sufficient to justify surgical procedures in the absence of a more urgent indication. No doubt many patients suffer from

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mild symptoms who never seek medical advice. The other most characteristic feature of the symptoms is that they are vague. None of them are pathognomonic. Gastro-intes-



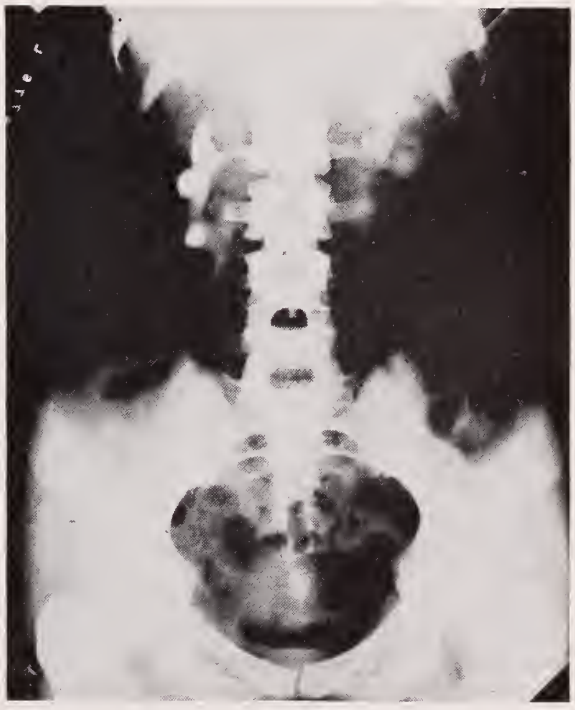
Case 1.—Bilateral retrograde pyelogram.

tinal disturbance, especially pain around the umbilicus, and constipation are more frequent even than are complaints referable to the urinary tract itself. Pain on hyperextension of the spine, Rovsing's sign, produces pain and is frequently mentioned. It was present in my case.

Physical examination—Palpation of the renal mass serves only to lead us to suspect fused kidney. Once it has been suspected we proceeded at once to pyelography, either intravenous, retrograde, or both. The pyelograms are so characteristic that having been seen a few times they are unmistakable. The pelvis and calyces are frequently bazaar, but the following characteristics are always present, namely:

The lower pole of the kidney approaches the spine. The lower calyx at least points toward the spine instead of away from it as in the normal pyelogram. The others may do likewise or at least they are in an anterior position rather than lateral. The ureters are shortened and are attached abnormally high. The renal mass is always lower than the normally placed kidney. If this diagnosis is made in the course of a routine examination and there are no symptoms, and if there is good function, of course nothing should be done. However, they should be regularly checked because any anomalous kidney is subject to extra hazards and irreparable damage may be done before it is suspected. The type of operation depends of course upon the pathology to be corrected. Emergency surgery may be indicated. Where neither portion of the renal mass is to be resected, division of the isthmus extraperitoneally is the operation necessary. Baker and Colston strongly recommend that nephropexy be done on the side of the incision at least, for they maintain that lack of proper drainage will certainly produce trouble. Only a few cases so operated have been reported, but they appear to be uniformly successful in increasing or maintaining renal function. The technique of the operation cannot be accurately described for no two cases are identical. The best incision is the extended classical lumbar approach with retroperitoneal exposure of the kidney, taking great care to visualize and ligate the anomalous vessels which are almost always present and also taking pains not to too greatly impair the circulation to the parenchyma in case it is not to be removed. Double mattress sutures behind the clamp will generally control hemorrhage. A portion of the kidney capsule or at least some fat should be placed over the divided stump.

I shall give a brief case report presently and will show you the pyelograms before and after surgery together with a motion picture in color of the operation itself. The



Case 1.—Intravenous pyelogram.

picture was not intended as a model in technique and was not taken to show publicly but rather it is one of a series that I have taken recently to show myself in slow motion a multitude of unnecessary maneuvers that I do with the hope that some of them can be eliminated. I recommend such a picture as a post-graduate course for anyone.

The patient is a married woman, age 20. Nothing significant in her past history or family history. She was seen first in June, 1938. Please note the complaints in view of what has been said above with reference to complete examination. Chief complaint is constipation. She had to take something about every night and constipation was always worse at the menstrual period. Backache, especially in the upper lumbar region, often worse when she gets up in the morning. She says she sleeps on her back and the pain is improved when she gets up. She has had urinary frequency for years, occasional nocturia, no pain or dysuria. She has had frequent attacks of mild pain in the lower abdomen, especially the right lower quadrant. Stooping also increases her backache.

Her physical examination was negative except for slight tenderness in the right lower quadrant, blood pressure 120/90, catheterized urine contained an occasional pus cell. The urea nitrogen was seventeen, sedimentation twelve, hemoglobin eighty-five per cent and R. B. C. 3,960,000. She had chronic, infected tonsil tags. She was dismissed without a diagnosis. She was seen again six months later with an acute follicular tonsillitis from which she promptly recovered. In March, 1939, she came to the office by ambulance prepared for an appendectomy following her mother's diagnosis. Her chief complaint was pain in the right flank, nausea, vomiting, fever 101 degrees, local and rebound tenderness over the right lower quadrant. The urine at this time showed four plus albumin and four plus pus with a multitude of bacteria, chiefly colon bacillus. Intravenous pyelograms which are here for your inspection suggested horseshoe kidney. Cystoscopic examination showed a moderately inflamed bladder throughout. Catheter passed on the right side with ease, the urine contained large quantities of pus. The catheter would not pass on the left, apparently due to direction of the ureter. There was some function on both sides but the right side shows marked hydronephrosis. I will describe the operation with the movie in colors. She made an uneventful recovery, has had no illness of any kind since. She has gained weight, strength and attends to her household duties without complaint. However, a recent check-up with intravenous pyelograms shows some hydronephrosis in the remaining portion and the urine containing no pus, but four plus albumin and a good many casts. There is no change in the blood pressure and the eye grounds show no nephritis. I would like very much for you to tell me whether at this time I should do an nephropexy on the remaining kidney with the hope of improving function.

COMMENTS:

1. Horseshoe kidney is more common than is generally suspected.
2. The symptoms are often vague and are not confined to the urinary tract.
3. Enough was found at our first examination although the findings were few and the symptoms were indefinite to have justified a more complete examination.
4. The diagnosis is easy once it is suspected provided modern urological methods are used.
5. Surgery adjusted to the particular case is the only treatment.

CASE NO. 2: C. S., age 33 years, unmarried, came to the Clinic six weeks ago with a complaint of general malaise and weakness. He also complained of his body aching all over, especially the knees and other joints. He was very nervous and drowsy. He has had no fever recently or any urinary disturbance. He had slight dysentery recently and says that change of position produces dizziness. It is interesting to note that three years ago he had an intestinal disturbance which was diagnosed amebic dysentery, for which he was treated for a year with carbosome and emetine. At routine examination the Wassermann was found to be four plus and remained so on further checks and the spinal fluid Wassermann was also four plus. He was put on anti-leutic treatment but did not improve. Routine urinalysis showed persistent red blood cells and for this reason only he was referred to me for urological consultation.

The cystoscopic examination of the urethra, bladder neck and trigone was normal. Catheters pass with ease on the right side but not as far as normal. On the left side the catheter stopped at the pelvic brim. There was a very slow urinary drip. Flat picture shows what is apparently a stone just above the right pelvic brim. Retrograde pyelogram showed markedly deformed kidney low on both sides. Pelves approximate the spine. Calyces are pointing inward, ureters far to the outside and inserted high. The calyces and pelves are dilated. Check by intravenous pyelogram shows the same picture and in one picture the isthmus is well defined. These findings are sufficient for a positive diagnosis. It appears that this patient should be operated perhaps after further anti-luetic treatment.

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Undulant Fever (Brucellosis)*

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Undulant fever is primarily a disease of animals transmitted to man. The animals concerned are goats, cattle and swine.

The disease was discovered in man on the Island of Malta. Marston gave the first account and described the clinical picture and postmortem findings under the name of Mediterranean remittent fever. Bruce (1887), discovered the causative organism in goats and called it Micrococcus Melitensis. Bang, in 1897, described the etiological agent of infectious abortions in cattle and named it Bacillus Abortus. Evans, in 1917, compared the two organisms and showed them to be the same morphologically, bacteriologically, and chemically. Traum (1914), isolated B. suis from swine.

The disease is spread by contact with infected animals and meats or through contaminated dairy products such as butter, cheese and ice cream.

There is very little known about the pathology of the disease, but Parson and Poston have reported autopsy of a case simulating Hodgkins disease in which they cultured the organism from the Lymphnodes.

The relative frequency of symptoms is in the following order: fever, sweating, chills, fatigue and weakness, anorexia, upper respiratory symptoms, nocturia, headache, abdominal pain, urinary frequency, loss of weight, and joint pain. The following symptoms may also be present: insomnia, nervousness, irritability, poor memory, impotency, and the patient may be depressed, despondent or disheartened.

The signs in order, according to Passarelli and LeRoy Sloan of Cook County Hospital, are abdominal tenderness, chest findings, palpable spleen, inflammatory joints and palpable liver. However, Calder of San Antonio states that palpable liver is more common than the spleen.

In a study of the blood picture of brucellosis, Munger and Huddleston found a tendency to microcytic anemia in thirty-five per cent of the patients studied and a tendency to macrocytosis in nineteen per cent. The average ratio was thirty-nine cells smaller than normal, thirty-seven normal and twenty-four larger than normal instead of the average ratio of thirty-three: thirty-four: thirty-three. The red blood cells varied in size from three to ten microns. In their study of the white blood cells they found a tendency toward a leucopenia with a relative and absolute monocytosis, however, after injection of Brucellin there was a rise in the count. Many of the small lymphocytes are larger than normal which simulates infectious mononucleosis. Thirty to eighty per cent of the small lymphocytes appear to be of this type.

DIAGNOSIS

It is a fairly well accepted fact that, to make a satisfactory diagnosis, the agglutination test, skin test and opsonocytophagic test should all be carried out because it is possible only to have one of the three present. The agglutination test should be carried out first, as the skin test causes an increase of agglutins in practically all cases. It is also advisable to use a culture of B. tularensis as a control. The skin test may be carried out either by intradermal injection of Brucellergin or by use of weak dilutions of the vaccine.

The opsonocytophagic test, which is a test based upon the ability of the neutrophiles to phagocytise the Brucella Abortus, is usually done by Huddleston's technique. Huddleston and his associates have used the op-

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sonocytophagic test to classify their undulant fever cases as susceptible to the disease, infected or immune. They classify an individual who has a negative agglutination and negative skin test with an opsonocytophagic test of zero to forty as infected. A case which has a negative agglutination positive skin test and an opsonocytophagic test of zero to forty as infected. A case which has positive agglutination, positive skin test and an opsonocytophagic test of zero to forty as infeced. A case which has a negative agglutination, positive skin test and an opsonocytophagic test of sixty to one hundred as immune. A case which has a positive agglutination positive skin test and an opsonocytophagic test of sixty to one hundred as immune.

Keller, Pharris and Gaub compared the values of these tests and found that of one thousand, two hundred and forty-seven individuals tested, ninety-four and four-tenths per cent had negative agglutination and skin test; four and eight-tenths per cent had positive skin tests; one per cent had positive agglutination test; forty per cent had marked phagocytic activity; and eight and four-tenths per cent had moderate phagocytic activity; and fifty-one and six-tenths per cent had no phagocytic activity. It is also interesting to note that there is no definite relation between the severity of skin reaction and opsonocytophagic activity.

Angle and Algie of Kansas City did the skin test on 7,122 children and found six hundred and forty-two, or nine per cent, of them positive. They put out a questionnaire with leading questions and found that two hundred and eight of this group had nervous symptoms, one hundred and seventy-two had headaches, one hundred and fifty-seven had rheumatic symptoms, seventy-one were constipated, and twenty-two had fever; thirty-eight and seven-tenths per cent of this group had two or more of the above symptoms. In a control group of one hundred students they found twenty-six had nervous symptoms; fifteen had headaches; six had rheumatic symptoms; two were constipated; and one had fever; of this group thirteen per cent had two or more of the above symptoms.

From the above findings of Angle and Algie we are definitely led to believe that we may have a higher incidence of the disease than is thought at present. It is possible we are overlooking the diagnosis. Another fact that brings this out is the large number of positive reactions to the test for Bangs in cattle. Newman reported out of fifty-two thousand herds tested in Missouri sixteen thousand had reactors; six hundred forty thousand cattle were tested, and of these fifty-two thousand were positive reactors.

TREATMENT

At the present time there is no specific treatment for undulant fever. There are a number of different types of treatment discussed in the literature, and a number of these reports conclude that certain types of treatment are successful, but there is no series of cases which has been reported at the present time which is large enough to conclude whether any of the treatments are of much greater value than symptomatic treatment.

There are a number of cases reported in the literature in which polyvalent serum has been used. It has been found in a number of these cases that by giving 50 c.c. of the polyvalent serum intravenously daily for six days the patient became clear of fever after a short period of time. The symptoms were found to continue for two to three weeks after this type of treatment and then the patient apparently recovered. To read the results of this type of treatment, it sounds very convincing; however, there are other cases reported in the literature of serum therapy in which the results are not so convincing, and because of the price of the serum and in view of the fact that the results may not be satisfactory the series of cases treated in this manner has not been very large.

Prickman, Bennett and Krusen reported a series of cases treated at Mayo Clinic by Kettering Hypertherm. These cases were given three sessions of fever at three-day intervals with the temperature between one hundred and five to one hundred and six. They reported failure in thirty-three and three-tenths per cent of the cases and sixty-six and six-tenths per cent cure. Their series is also too small to draw any conclusion from.

There are a number of cases reported in the literature that have been treated with sulfanilamide, prontosil and neoprontosil. A number of these have shown improvement. However, to off-balance this, there are a number of cases reported as cures that may have only been remissions instead of cures. DeBono of the Royal University of Malta reports a series of twenty-five cases in which prontosil was used in doses of about sixty grains daily. Of this series, five were unable to tolerate the drug and four of the cases were given the drug over a period of twelve days instead of the average of nine days. Nineteen patients showed no apparent effect from the drug. In six cases the fever came down and stayed down but later the fever recurred in all except one case. In a control series of twenty treated symptomatically, two were still running fever when he made his report. He concludes that prontosil is of no value in treating the disease in Malta as there a case of undulant fever usually

lasts about six weeks and clears up spontaneously, and occasionally a case lasts a year.

Wainwright has reported seven cases treated with neoarsphenamine in which six obtained good results and one case, in which the diagnosis was not definite, showed no results.

At present vaccine therapy seems to be the vogue and is given in increasing doses from 0. 2 c.c. up to 1 c.c. or to tolerance and may be given over a period of several weeks. There is some debate as to whether it is of more value than foreign protein therapy. However, it is very interesting to note that the patient in a large number of cases feel much better when they are taking the vaccine whether they are free of fever or are not. It is like all other forms of treatment developed up to the present; however, its value is in doubt.

Dr. Calder of San Antonio has brought out a fact that is interesting to note in regard to treatment and that is that the giving of nicotinic acid by mouth or intravenously seems to shorten the course of the treatment.

Another interesting fact mentioned by a number of writers is that a change to a higher climate often shortens convalescence.

At this point I would like to report a case in which serum therapy, sulfanilamide and vaccine were all used.

M. M., age 32, a farmer, who apparently was in very good health, accompanied his wife, who was pregnant, to the office. While there she mentioned the fact that he had not been feeling well and stated that he had fever. He refused examination but returned on August 30, 1938, still complaining of fever and rheumatic symptoms in his joints and back. He also stated that he had lost about 30 pounds in weight. Upon questioning him, the information was obtained that he had had fever for a period of about five weeks with rheumatic symptoms, fatigue and weakness, anorexia, chills and upper respiratory symptoms. In attempting to gain further information, a history of having treated a sick cow previous to the onset of his illness was obtained. The cow had died without a diagnosis being made.

Examination revealed a well-developed, well-nourished white male about 32 years of age who weighed 200 pounds. His temperature was 101 degrees and pulse was 100. B. P. 120 over 78. There was abdominal tenderness with slight enlargement of spleen and liver. W. B. C. count was 5,200 with a predominance of lymphocytes.

A tentative diagnosis of undulant fever on typhoid was made. An agglutination test was positive for undulant fever. The patient was given 25 c.c. of Brucella Mellitensis Antiserum and 25 c.c. the following day. His temperature dropped to normal on the following day and remained normal for five weeks and he was also free of symptoms during this period but did not regain his weight. At the end of the five weeks' period he returned to the office complaining of the same group of symptoms as when originally seen. He had also lost five pounds more weight. At the time it was suggested that he take more serum but he stated he was unable financially to do so. He was put on sixty grains of sulfanilamide for the next nine days and his temperature again dropped to normal where it remained three weeks. He again returned complaining of similar symptoms and was started on another course of sulfanilamide which was stopped about the fifth day because of a marked leukopenia. However, after about four days the treatment was continued and his temperature again dropped and remained normal about two weeks. At the end of this time he again had fever. At this time it was decided that vaccine might be of value and he was given 10 c.c. of Lederle's Brucella Melitensis vaccine starting with a dose of 0.1 c.c. and gradually increasing the dose to 1 c.c., the doses being given at intervals of three to five days depending upon the reaction. A short time after this course of therapy the patient's temperature dropped to normal and he has continued to remain free of symptoms. A fact of interest is that he began to feel improved immediately after vaccine was started even though he had fever.

I think, however, this case demonstrates that we should be slow in evaluating any type of treatment in undulant fever as there may be a return of symptoms after any type of treatment and it may be that this case cleared up spontaneously as has been stated occurs in the cases on the Island of Malta.

CONCLUSIONS

1. To make a satisfactory diagnosis of undulant fever the skin test, agglutination test and opsonocytophagic test should all be used.

2. In view of the number of positive skin tests found in testing a large group of school children and the large number of cattle that have positive reaction to the test for Bangs disease we are probably overlooking cases of undulant fever.

3. At the present time there is no definitely proven satisfactory treatment for all cases of undulant fever and there is no series reported in the literature large enough to make any conclusion as to the most satisfactory treatment.

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DISCUSSION

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Undulant Fever (Brucellosis)

Your State Health Department at the present time has no accurate data as to the incidence of brucellosis in Oklahoma as we cannot take these data from laboratory reports of serum agglutinations, as the interpretation of positive agglutinations in human blood in terms of active infection is not an easy matter since as many individuals have brucella agglutinins from a past infection or from recent exposure to infective materials, as in the case of veterinarians, packing house workers and breeders of livestock.

Doctor Fry has very ably brought out the fact that to satisfactorily diagnose brucellosis, agglutination, skin and opsonocytophagic tests must be carried out and correlated with the clinical findings. In 1939 when we compiled morbidity reports for brucellosis from laboratory reports, we had 372 cases for the year, while this year, where we are compiling them from the weekly morbidity report cards sent in by the physicians of the state, who have laboratory reports and clinical data at hand, we have only had 25 cases reported for the first three months of 1940. We feel certain that many cases have not been reported to us. We would greatly appreciate physicians reporting all cases of those diseases which are designated by law as reportable diseases, as prompt and accurate notification of the existence of a communicable disease is one of the first requirements for its proper control by your Health Department.

Your State Health Department laboratory is equipped to do agglutinations and opsonocytophagic tests and in selected cases cultures and guinea pig inoculations for the laboratory diagnosis of brucellosis. Opsonocytophagic tests must be done within six hours after blood is withdrawn on a citrated specimen of blood, so it is recommended that the blood be brought in personally to the laboratory rather than sent in by mail for this particular test.

The U. S. Department of Agriculture, Bureau of Animal Industry, in cooperation with your State Department of Agriculture has been doing agglutination tests on cattle since 1934. Under this program positive reactors were slaughtered and the owners paid indemnity by the Federal Government. Two years ago Congress passed a law requiring matching of this indemnity by State Governments. The last state legislature did not appropriate funds for this purpose, so at the present time no indemnity is being paid in this State. However, the testing program on a voluntary basis has continued and at the present time no indemnity is being paid in in Oklahoma. For a herd to be accredited, all reacting cattle must be destroyed and the rest of the herd pass three successful tests within a period of one year. For the month of March, 21,856 cattle were tested and 733 reactors were found.

The Standard Milk Ordinance is operating under the supervision of the State Health Department in 32 cities in the State. This ordinance requires that wherever raw milk is being sold the animals must be tested for brucellosis once yearly and reactors must be destroyed. No indemnity is paid for these animals. Thus, we can readily see that the incidence of brucellosis in humans in this State can be decreased greatly by education of the public to use Grade A raw milk which has been pasteurized.

*Epidemiologist, Oklahoma State Health Department, Oklahoma City.

EDITORIALS



POLICY AND PROGRAM OF THE NATIONAL PHYSICIANS' COMMITTEE FOR THE EXTENSION OF MEDICAL SERVICE

Evidence of Results

Two years of aggressive effort in defining and clarifying the issue (political control of medicine), in unifying the profession and informing the public has produced spectacular results.

In his speech on October 31st at Bethesda, Maryland, dedicating the National Institute of Health, President Roosevelt said:

"Neither the American people nor their government intend to socialize medical practice any more than they plan to socialize industry. In American life the family doctor, the general practitioner, performs a service which we may rely upon and trust.

"No one has a greater appreciation than I of the skill and self sacrifice for the medical profession. And there can be no substitute for the personal relationship between the doctor and patient which is characteristic and a source of strength of medical practice in our land."

Priceless Gains Made

THIS PUBLIC EXPRESSION OF OPINION REPRESENTS NOTABLE AND PRICELESS GAINS. IT WILL BE TRANSITORY OR PERMANENT IN DIRECT PROPORTION TO THE DEGREE OF THE SUSTAINING PUBLIC OPINION. THIS IS THE RESPONSIBILITY OF THE MEDICAL PROFESSION.

TO THE EXTENT THAT THE PUBLIC IS INFORMED OF THE AIMS, METHODS AND PHILOSOPHY OF AMERICAN MEDICINE WILL IT FIGHT AND DEFY REGIMENTATION AND UPHOLD THE EXISTING PATTERN OF MEDICAL PRACTICE.

Dr. Cary's Statement

In summarizing the discussions and conclusions of the individual members of the Management Committee of this institution, Dr. Edward H. Cary (Dallas, Texas), its chairman, said in part:

"The medical profession now represents the only important group in the United States which, while harrassed from within and without, has shown no slightest sign of capitulation or even of retreat.

"On the basis of this fact, it has automatically placed itself in the position of an intellectual leadership of those individuals, groups and institutions which seek to preserve the important elements of individual freedom and initiative and the principle of 'Free Enterprise.'

"If we live up to this opportunity and the serious responsibility it entails, the physicians of this country can—while preserving the independence of American Medicine—most importantly and vitally serve their country during its period of crisis and greatest stress."

IF THE INDEPENDENCE OF MEDICINE, OUR DOCTOR AND PATIENT RELATIONSHIP, AND OUR PATTERN OF MEDICAL PRACTICE ARE TO BE PRESERVED, WE MUST PRESERVE THE PRINCIPLES UNDERLYING OUR FREE INSTITUTIONS.

TO THE EXTENT THAT SUCCESS MAY ATTEND THESE EFFORTS, THE MEDICAL PROFESSION WILL BECOME THE MOST IMPORTANT SINGLE FACTOR IN SAFEGUARDING THE UNDERLYING PRINCIPLES OF INDIVIDUAL FREEDOM AND IN PRESERVING THE "AMERICAN WAY OF LIFE."

The accomplishment of this result, in any important degree, demands sacrifice on the one hand and active co-operation on the other

of the rank and file of the medical profession.

Never at any time in the past has there been a President or an administration in Washington which so urgently needed the intelligent, understanding co-operation of the general public. Never before was there such an opportunity for American physicians to take truly effective steps to preserve THE INDEPENDENCE, THE PHILOSOPHY, AND THE VERY SOUL OF THE PROFESSION AND, AT THE SAME TIME, BEST SERVE THE NATIONAL ADMINISTRATION AND THE UNITED STATES DURING ITS PERIOD OF GREATEST STRESS.

Nature of Activities and Objects

It is essential that funds be provided for:

1. A continuous flow of articles to more than eighty medical journals.
2. Stimulating discussion of this all-important issue in forty-eight state medical meetings, and in the meetings of two thousand county medical meetings and conferences.
3. Preparing and providing for the preparation of articles and releases for thousands of newspapers and hundreds of magazines, and arranging for their publication.
4. Speakers for medical and public meetings and arranging for physicians appearing before local groups on local radio broadcasts.
5. Radio broadcasts and the preparation of speeches and radio broadcasts to the generally available, and the providing of electrical transcriptions of short speeches and radio broadcasts and arranging for their effective use.
6. The maintaining of strategically important public contracts.
7. The arranging of conferences with boards of hospitals and clinics; business, industrial and other lay groups; and for group meetings of laymen.

All to the end that:

a. Political control of medicine can be avoided;

b. The independence of the profession and the pattern of medical practice be preserved; and

c. The American people can be resold on the incomparable advantages of the American Way of Life.

Why Such Endeavors

With the adjournment of Congress all pending legislation, including the Wagner National Health Bill, is killed—but—

It can be taken for granted that, upon the convening of the new Congress, Senator Wagner will introduce a new Health Bill with similar provisions. There are new senators who will be seeking the limelight. There are politically influential groups which will continue to demand drastic—even revolutionary — legislation dealing with health and medical practice.

The menace of political control of medicine and medical practice is real and constant. The advocates of such control are many. They are persistent and vigorous in their demands. ETERNAL VIGILANCE AND AGGRESSIVE, DEFENSIVE ACTION ARE ESSENTIAL IF WE ARE TO PRESERVE OUR INDEPENDENCE.

The Key To Successful Effort

The degree of effectiveness of this effort will be determined by one group — THE PHYSICIANS OF THE UNITED STATES.

In direct proportion to the extent to which the physicians seriously join this crusade will we be able to enlist the support of other groups and interests. With the nearly unanimous support of the rank and file of the medical profession, we will earn and secure the important support of other interests.

Two things are needed from physicians:

a. Contribution
b. Active, cooperative effort.

Will you enlist in this crusade?
Will you give of your time?
Will you give financial support?

You will receive a communication, if you have not already, of which the above is an abstract. There will be enclosed an envelope for reply.

Give the matter careful consideration, then support this movement to the extent your judgment dictates.—L.S.W.



• THE PRESIDENT'S PAGE •



The story of the boy sheep herder who cried "Wolf! Wolf!" must not be repeated by American Medicine. Doctors of Medicine in Oklahoma and all America must protect the public from the wolves who would use their miseries and emotions for ulterior purposes. Political medicine is a more savage scavenger than any other proposal that has ever before been suggested and proposed in one form or another since the advent of democratic government and the right of free enterprise.

American Medicine has been and always will be progressive. I do not believe there is a single doctor in America who would not willingly alter his method of practice, even unto a sacrifice to himself, were he convinced that political medicine would be to the best interests of the public. Facts from countries having political medicine do not, however, prove the point on this subject. Death rates for every cause of death, as well as the life expectancy of the American public, prove graphically that the American way is still the best way.

To protect the public in matters of health is the responsibility of the medical profession. Its response must not be passive, but rather progressive and constructive. The Wagner Health Act and the Wagner-George Hospital Bill again will be brought to the front in Congress. In our own state a legislative proposal will be submitted to place the control of medicine in the hands of the minority rather than the majority. What will be your response? Will you accept or reject this responsibility of protecting the public on matters of health?

We are still free and independent citizens with the right and privilege to express our opinion of fancies, theories, and even pipe dreams of idealists, the outcome of which will be directly reflected from the individual doctor's attitude and activity. Is it worth any of our time, and what do we intend to do about it? Let us accept the responsibility and challenge.

Henry A Turner

President.



ASSOCIATION ACTIVITIES

Interesting Data Is Given On State Insurance Fund

The Board of Managers of the State Insurance Fund, composed of Governor Leon C. Phillips, Attorney-General Mac Q. Williamson, and the Secretary of the State Insurance Board, Mr. B. E. Harkey, in a recent meeting made public interesting information regarding the operation of the Insurance Fund as it concerns both the medical profession and the public.

The State Iusurance Fund began operation July 1, 1933, with an appropriation from the State Legislature in the amount of $25,000. This original appropriation was returned to the general revenue fund the following year, and since its inception the Fund has operated and paid its compensation and medical claims without a single cost to the taxpayers—an enviable record.

Since the establishment of the Fund, medical and hospital bills paid, as of October 1, 1940, have amounted to $710,339; compeusation, $1,880,860; and the operating expense has amounted to $357,304. Further figures concerning the medical and hospital payments bring to light the fact that the average monthly percentage paid by the Fund for these services, to April 1, 1940, amounts to 24.35 per cent, while this same cost for like services paid by other companies in Oklahoma writing the same type of business has averaged only 16.04 per cent.

In April of 1940, Mr. Mott M. Keys, formerly of the State Insurance Department, was appointed director of the Fund and, understanding that the Fund paid thousands of dollars annually to the medical profession of Oklahoma, took steps on the advice of the Board of Managers to reorganize the medical and hospital division into a more compact and efficiently managed unit, in order that the doctors of Oklahoma might receive more prompt attention for their claims.

In line with this reorganization, the Board of Managers appointed Dr. Earl D. McBride of Oklahoma City as temporary medical director, with the understanding that he serve without remuneration. Dr. McBride served in this capacity from July 3 to September 20, when he resigned and at which time the Board of Managers extended to him a personal vote of thanks for his services, which were reudered without cost to the state or to the Insurance Fund.

Following Dr. McBride's voluntary resignation, the Insurance Fund requested of the Council of the Oklahoma State Medical Association that a committee be appointed to which the Fund might refer questions concerning its medical policy on controversial questions.

There is no doubt that the Fund is now in a position to render its services, insofar as the medical department is concerned, in a much better manner than has heretofore ever been possible. Mr. Keys has requested that the doctors of Oklahoma be advised of the Fuud and the Board's sincere appreciation for their patience and cooperation in assisting the Fund toward a solution to a difficult problem.

The medical profession of Oklahoma has had reasons in the past to be somewhat disgruntled over the management of the Fund in some particulars, but there is no doubt that every effort is being made to operate the Fund on a business and actuarial basis that will be of mutual advantage to both the Fund and the professiou. It is sincerely hoped that coutinued cooperation will be extended the Fund and that the original intent behind the establishment of this service not be lost. The Fund was organized in order to render a service to society which could not be obtained through private business and which, by its record of payment, has greatly added to the benefits enjoyed by employees of employers who are not able, for one reason or another, to comply with the regulations of private insurance carriers, other than at a prohibitive cost.

The medical profession of Oklahoma is to be complimented for the part it has played in this service.

Pediatrics Course Will Start In Fifth Circuit December 20

The Post-Graduate Pediatrics course will open the week following Christmas in the counties of Oklahoma, Lincoln, Pottawatomie, Seminole, Hughes, Cleveland, McClaiu and Garvin and will include the teaching centers of Oklahoma City, Shawnee, Wewoka, Norman and Pauls Valley. The itinerary has been announced to include Norman on Monday evenings beginning December 30, Pauls Valley Tuesday evening; Oklahoma City Wednesday evening other than the first lecture which will be Saturday evening January 4th; Wewoka Thursday evening; and Shawnee Friday evening. In Oklahoma City all lectures and clinics will be held at St. Anthony Hospital in the Class Room of the Nurses Home.

To date, a total of 366 physicians have taken advantage of the Post-Graduate Pediatrics course. Dr. James G. Hughes, instructor, of Memphis, Tennessee, has just returned from the National Pediatric Academy meeting which, this year, was held in Memphis. Doctor Hughes had an exhibit in the scientific section of the National Academy meeting. The course consists of 10 didactic lectures illustrated by motion pictures and lanteru slides. Plans have been made in each center for clinics over patients.

Doctor Hughes will make his home in Oklahoma City during the ten weeks' period while his course is being offered in central Oklahoma. Mrs. Hughes and their young son will arrive in Oklahoma City immediately after New Years. During the past ten weeks Doctor Hughes and his family have resided in Stillwater, which was the center of the circuit in north central Oklahoma.

Duriug the period the course operates through January, February and half of March, Doctor Hughes will be available for lay lectures to study clubs and P.T.A. groups, or civic clubs on any one of the following subjects: 1. Keeping the Well Child Well (Illus. lantern slides). 2. Recent Medical Discoveries. 3. Tuberculosis in Children (Illustrated). These lay lectures can be adjusted to meet any period of time, so states Doctor Hughes, and are without cost to lay groups. Officers of County Medical Societies may obligate Doctor Hughes in any of the foregoing counties immediately with chairmen of study clubs or groups, and detailed arrangements can be made later for any of his lectures as listed above by writing the Post-Graduate Committee office, Oklahoma State Medical Association, 210 Plaza Court, Oklahoma City, or by telephoning 7-1420, Oklahoma City.

Physicians desiring to register for the course in any of the foregoing centers which opens the week following Christmas should mail their enrollments with their fee of $6.00 attached to: 210 Plaza Court, Oklahoma City. With this fee each physician receives a printed manual containing all of the lectures of Doctor Hughes delivered in his course, and those who attend seven or more of the lecture sessions will receive a certificate of attendance awarded by the Oklahoma State Medical Association.



One of Polyclinic's three modern operating rooms.

EFFICIENTLY EQUIPPED OPERATING ROOMS

Correct equipment complements the surgeon's skill at Polyclinic. One example of thoughtful planning is a modern sterilizing plant, accessible to all operating rooms. Another is a special cabinet for warming blankets. There is new and specialized equipment for the study and care of urological cases.

At Polyclinic, operating room service is maintained on a 24-hour basis with a staff of anaesthetists and specially trained graduate nurses on duty at all times.

MARVIN E. STOUT, M.D.
Owner

JOHN A. CUNNINGHAM, M.D.
House Surgeon

POLYCLINIC HOSPITAL

THIRTEENTH and ROBINSON OKLAHOMA CITY

State Medical Reserve Officers Called To Active Duty

By mid-November, twelve medical reserve corps officers who are members of the Oklahoma State Medical Association had been ordered to active duty by the Eighth Corps Area Commander.

The physicians, now serviug actively in the medical corps of the U. S. Army, are:

Dr. William Douglas Anderson, Captain, Claremore; Dr. Bernard Eugene Bullock, First Lieuteuant, Clinton; Dr. William Walker Cotton, First Lieutenant, Clintou; Dr. Paul Joseph Craden, First Lieutenant, El Reno; Dr. Hervey A. Foerster, Captain, Oklahoma City; Dr. Gustavus D. Fuuk, First Lieutenant, El Reno.

And Dr. Ralph W. Hubbard, Captain, Oklahoma City; Dr. Howard C. Martiu, First Lieutenant, Oklahoma City; Dr. Fred Lindley Patterson, Jr., First Lieutenant, Mountain View; Dr. William G. Paul, First Lieutenant, Durant; Dr. Alvin Winfred Paulson, Captain, Clinton; Dr. Galen Alonzo Rogers, Captain, Talihina.

UNINTERRUPTED SUPPLY OF DOCTORS FOR PREPAREDNESS IS VITAL TO NATION

"An uninterrupted supply of qualified doctors of medicine to meet the future demands of adequate national preparedness and the needs of the civilian population is vital to the future of our natiou," The Journal of the American Medical Association declares in a recent issue. "The Committee on Medical Preparedness of the American Medical Association urged last July that preparation for the conscription of the man power of this country should include provision for the continuation of medical education of students in medical schools and of interns in approved institutions. The Selective Training and Service Act of 1940 does defer the conscription of students in schools but only until next July. Specific deferment is uot provided for those who may be completing their medical training as interns or as residents.

"An amendment has now been proposed to the Selective Training and Service Act of 1940 by Seuator Murray of Montana in the form of a bill, S. 4396, providing that 'medical and dental students at recognized medical aud dental schools, and interns and resideut physicians, surgeons and dentists at recognized hospitals' shall be exempt from training aud service but not from registration. Any such student, intern or resident, the bill continues, who is a member of a reserve component of the land or naval forces of the United States shall uot be ordered or called to active duty or into active service in any such forces without his consent, except in time of war.

"Fiually it is proposed that any person selected for training and service under the act (1) who has been awarded a degree of doctor of medicine or doctor of dental surgery by a recognized medical or dental school, (2) who holds a valid license to practice medicine or dentistry and is eugaged in such practice at the time of his selection, and (3) whose physical and mental fitness for such service has been satisfactorily determined shall iu lieu of induction for training in service be commissioned as an officer iu the Medical Department Reserve, Officers' Reserve Corps, and ordered into active military service of the United States as provided in the joint resolution approved August 27, 1940, by which the President was authorized to call into active service members of the National Guard and Reserve components of the Army. Senator Murray's bill was referred to the Senate Committee on Military Affairs. A companion bill, H. R. 10587, is pending iu the House Committee on Military Affairs. Until and unless these measures become law interns, medical students and residents should provide for local selective boards information and affidavits indicating their desire for exemption because of essential work for the public health."

Arteriosclerosis Is Vast Medical Problem

Arteriosclerosis, the hardening of the arteries which threatens all persons over 50 years old, is the vastest of all medical problems of the future as well as the most neglected, Irving S. Wright, M.D., New York, declares in The Journal of the American Medical Association.

With the average length of life prolonged to over 60 years, he points out, such a disease condition becomes of increasiug importance. There are definite degenerative changes present somewhere in the arterial trees of practically all individuals over the age of 50, thus making possible the onset of arteriosclerosis. "Of the population over 50 years of age," Dr. Wright says, "60 per cent (15 million) will die of some cardiovascular-renal syndrome (set of symptoms referable to the heart, blood vessels and kidneys) whereas only 9 per cent will die of cancer. A very large but as yet undetermined portion of that 60 per cent will die as a result of degenerative changes of the arteries, with the cardiac (heart), renal (kidney) or other syndromes merely the results of secondary ischemia (local aud temporary deficiency of blood) or hemorrhage.

"As these syndromes frequently produce prolonged aud paiuful disability before death, a change in philosophical approach might well be considered. Perhaps the mere prolongation of life should no longer be sought as the highest goal but rather longevity only to such a degree as it is compatible with happiness and a full life free from paiu aud invalidism.

The medical schools for the most part give woefully inadequate training in the study and care of arteriosclerosis. Too frequeutly the practicing physician fails to recoguize its manifestations until gangrene has occurred. The public cares little for what it considers the vagaries of old age, although all who achieve old age are liable to them. Too few research workers have engaged in its study, to a large extent because of lack of endowment. Truly, it has been a neglected field in proportion to its importance."

Sulfanilamide For Ulcerative Endocarditis

Prolouged treatment with sulfauilamide cured a case of acute ulcerative endocarditis, a usually fatal heart disease, Samuel Alexander, M.D., and Stewart F. Alexander, M.D., Park Ridge, N. J., report in The Journal of the American Medical Association for November 16.

The disease consists of inflammation of the membrane lining the heart and results in ulceration of the valves of the heart. In this case it was due to infectiou with a streptococcic organism capable of destroying red blood cells.

The cure is attributed by the authors to the fact that treatment was instituted early in the disease, perhaps before deep bacterial invasion had taken place, and that the drug was given for six weeks. There seems little doubt that moderate dosage, loug instituted, is more effective for deep seated infections than massive doses for a shorter period of time, they say.

The School Child's Breakfast

Many a child is scolded for dullness when he should be treated for undernourishment. In hundreds of homes a "continental" breakfast of a roll and coffee is the rule. If, day after day, a child breaks the night's fast of twelve hours on this scant fare, small wonder that he is listless, nervous, or stupid at school.

A happy solution to the problem is Pablum (Mead's Cereal cooked and dried). Six times richer than fluid milk in calcium, ten times higher than spinach in iron, containing vitamins B1 and G, Pablum furnishes protective factors especially needed by the school child. The ease with which Pablum can be prepared enlists the mother's cooperation in serving a nutritious breakfast. This palatable cereal requires no further cooking and can be prepared simply by adding milk or water of any desired temperature.

Your preference appreciated on prescriptions for *Cough* and *Cold* preparations



A view of our Control Laboratory

Specify *"First Texas"*

FIRST TEXAS CHEMICAL MFG. CO.

DALLAS, TEXAS

News From The State Health Department

All registrants who are called for physical examination under the draft act will take a Wassermann test for syphilis, Dr. G. F. Mathews, Commissioner of the Oklahoma State Health Department has announced.

Details for doing the work were arranged in a conference with Dr. Louis Ritzhaupt, Guthrie, medical officer for the draft in Oklahoma.

The serologic test for syphilis is required under regulations of the Selective Service Act, and procedure for taking the test has been outlined by Dr. Thomas Parran, Surgeon General of the United States Public Health Service.

It is estimated that Wassermanns will be taken on 180,000 Oklahomans of draft age who are called for a year's active duty in the next five years.

The Wassermann will be taken by physicians who examine registrants called for duty. Prior to call for induction a second serologic test will be required for registrants whose first test was reported positive.

The State Health Department laboratory will perform the tests. Laboratory tests for all suspected cases of gonorrhea also will be made.

The health department has sent out 5,400 containers and report forms to the various examining boards. "Based on previous studies made throughout the nation, 16,000 of the 300,000 men of military age in Oklahoma will be infected with a venereal disease," Doctor Mathews said.

A second dental trailer for use in the public health dental program has been secured by the Oklahoma State Health Department.

Working in close cooperation with the dental profession, the dental division, directed by Dr. R. F. Erdman, is rapidly expanding its educational program in schools of the state.

Dental hygienists contact a school, do educational work on the importance of dental care, then examine the children's teeth. A record is made and needed corrective work is detailed and explained to the parents.

Arrangements for corrective work are made in close cooperation with the local dental societies. Parents of children are urged to take them to the family dentist regularly. For those who are unable to pay for dental treatment, arrangements are usually made with local dentists for them to do the corrective work in indigent cases. Funds for indigent treatment are provided jointly by the State Health Department and a local sponsoring agent, such as a civic club or a Parent-Teacher Association.

A "traveling laboratory," equipped to make all common tests for water and sewage treatment plants will be placed in operation soon by the Sanitary Engineering Division of the State Health Department, H. J. Darcey, director, has announced.

The laboratory will be housed in a trailer. Purpose of the "traveling lab" is to make effective stream pollution studies, and check the operation of water and sewage treatment plants.

Many municipal plants in Oklahoma are not equipped for running necessary laboratory determinations. This equipment will make it possible to do all of the needed work, and will save time.

In addition, there are many tests which, if not made quickly, are not accurate, due to changes in the composition of water and sewage.

The laboratory, manned by a chemist, will be sent to state cities when requested by city officials, and will be sent where a need arises.

Group Hospital Service News

QUESTIONS AND ANSWERS REGARDING G. H. S.

1. Question: Who may join?
 Answer: A minimum number of 10 employees of one organization. If the total number of employees is over 30, approximately 1/3 must join to place the plan in effect.
2. Question: What is the age limit for members?
 Answer: Under age 65 years at the time of joining. However, the member may continue his membership at the same rate after attaining this age.
3. Question: When does the service go into effect?
 Answer: The service becomes effective immediately upon acceptance of the group, with the exception of maternity care which is covered after 10 months.
4. Question: Who guarantees the service?
 Answer: The participating hospitals guarantee the service to the members.

The trailer will have a 20-degree incubator, for making biochemical oxygen demand tests; will be equipped to make all solid determinations in water and sewage, including total, suspended, settleable and volatile solids; equipped to make all necessary bacteriological analyses; and will be equipped to determine the efficiency of chemical treatment in water and sewage treatment plants.

Public health departments devote much of their attention to the child, the earlier in life the better.

The doctor follows a working schedule whereby he examines a majority of the school children of his county, and examinations are done on infants and pre-school children at numerous clinics held in districts of the county.

In his examination the doctor looks for defects and urges parents to seek medical advice where treatment is indicated. The private physician is the one who must do the treating and the corrective work.

Tonsillectomies are recommended, eyes and teeth are examined and when a need of treatment is seen, the local, private practitioner is pointed to as the man to see.

To make the entire population health-conscious, particularly to care for the health of youngsters, is one of the major objectives of the health department.

Details for a cancer control program, to be sponsored jointly by the Oklahoma State Medical Association and the Oklahoma State Health Department, will be determined in a meeting to be held soon, Dr. G. F. Mathews, commissioner has announced.

A conference will be held with members of the Medical Association Committee for Study and Control of Cancer, consisting of Dr. Gregory E. Stanbro, chairman, Oklahoma City, Dr. Ralph A. McGill, Tulsa, and Dr. Paul B. Champlin, Enid.

A cancer control program was sponsored in 1939-1940 by these two groups and the effort was considered an outstanding success. Dr. J. Samuel Binkley of New York City delivered lectures on cancer to both lay groups and the medical profession in 40 Oklahoma cities during a two months' period.

The question of what type of program to hold this year, whether a lecture series or in some other form, will be decided at the conference, date for which is to be set soon, Doctor Mathews said.

5. Question: What are the benefits received?

Answer: (1) 30 days IN-PATIENT care each contract year (dependents 21 days). (2) Two-bed room (not a ward). (3) Meals and special diets. (4) General nursing care. (5) Operating room as often as needed. (6) Ordinary surgical dressings. (7) Ordinary drugs and medicines. (8) Ordinary laboratory service. (9) An allowance of $4.50 a day toward the cost of any available private room; and all additional services as provided in the Membership Agreement are furnished to members choosing private instead of semi-private accommodations. (10) Ambulance service in emergencies resulting from accidents, or upon recommendation of a physician, for removal from hospital of first admission to a hospital of patient's choice, not to exceed a distance of 50 miles in either instance. (11) Maternity care for a period of 12 days after 10 months' membership, including delivery room and nursery care.

6. Question: When a person uses a non-member hospital does the plan pay for this?

Answer: Yes. Group Hospital Service will reimburse the member or dependent up to $4.50 per day in any general hospital anywhere in the world.

7. Question: What illnesses are excluded?

Answer: Only those which are generally not acceptable to the hospital.

8. Question: Does the plan pay doctor's fees?

Answer: No. This is a hospital service plan to include the expenses of hospital care.

9. Question: What does the service cost monthly?

Answer: Employed members: $1.00 enrollment fee, 75c monthly.
Dependents: 60c monthly for one dependent, 15c monthly for all additional dependents (not each). Maximum family price $1.50 monthly regardless of number. NO ENROLLMENT FEE FOR DEPENDENTS. (Eligible dependents at above rates include spouse; also all unmarried children under the age of 21 years. Mothers, Fathers, Sisters and Brothers are not eligible as dependents).

10. Question: May an employed woman include her employed husband or vice-versa?

Answer: Yes, the employed husband or wife may be included as a dependent member.

11. Question: When the employed person has a dependent mother or sister, can they be included as dependents?

Answer: No. Only the immediate family of husband, wife, and children under the age of 21 years are extended the privilege of joining at the present time.

12. Question: When a member leaves his place of employment, is the service discontinued?

Answer: No. He may continue his membership at the same monthly rate. However, we do request that he change his method of payment from monthly to semi-annually or annually to facilitate bookkeeping expense, etc.

13. Question: If a member of the family is in the hospital at the time of enrolling, will his bill be paid by Group Hospital Service?

Answer: No. The application for membership is reduced to a minimum amount of information, but it includes the statement that all persons are in good health and have not been advised or have knowledge of any present physical condition requiring hospital care.

14. Question: Is a medical examination required?

Answer: No. None required at any time.

15. Question: Do members have free choice of hospital and physician?

Answer: Yes. The member and his doctor determine the hospital just as he does today.

16. Question: Upon entering the hospital, should a member inform them of his membership?

Answer: Yes. A member should present his membership card so that the bill will be sent to Group Hospital Service.

17. Question: Should a member then file a claim with Group Hospital Service?

Answer: No. Nothing more is required and red tape is completely eliminated.

18. Question: Who determines when members should leave the hospital?

Answer: Their attending physician.

19. Question: Must a member sign a contract for a year or longer?

Answer: No. They may withdraw at any time.

20. Question: Is the contract cancellable by Group Hospital Service?

Answer: No. Group Hospital Service cannot cancell except for non-payment of dues, fraud or to comply with any Federal or State Laws which might be passed.

21. Question: Who are the stockholders or investors in Group Hospital Service?

Answer: There are none.

22. Question: Do all Officers and Trustees receive a salary?

Answer: None of them do. They all serve without pay, giving their services to the people of the community. Employees, both field and office are paid a salary and no commissions or bonuses are paid to anyone.

23. Question: What happens to unrequired surpluses?

Answer: They are used to extend and buy more benefits for members.

24. Question: Who started Group Hospital Service in Oklahoma?

Answer: The Oklahoma State Medical Association and the Oklahoma State Hospital Association. It also has the approval of the American Hospital Association.

25. Question: Who supervises and regulates Group Hospital Service?

Answer: The Officers and Trustees and the Oklahoma State Insurance Department.

26. Question: How many approved non-profit hospitalization plans in the United States and what is the total membership?

Answer: There are 60 approved plans with a membership of about 6,000,000 persons.

27. Question: Is this movement in sympathy with or related to socialized or state medicine?

Answer: No. On the contrary, its tendencies and objectives are to preserve the voluntary American way of independence.

• OBITUARIES •

Dr. LeRoy Long
1869-1940

In the death of Dr. LeRoy Long the medical profession suffered a great loss. For a period of forty-five years Dr. Long served his profession with unquestionable skill, always conditioned by unfailing loyalty and wisdom. His character was above reproach and his influence for good in his community was recognized by all who knew him. His striking appearance, his dignified demeanor, his ready speech, his sense of propriety, and his professional attainments gave him a high rating at home and abroad.

Dr. Long was born in Mecklenburg County, North Carolina, January 1, 1869. He died of coronary disease in Oklahoma City, October 27, 1940. He graduated from the Louisville Medical School in 1893 with the highest honors of his class. He was appointed instructor in anatomy and urological surgery and served in this capacity until 1895, when he located in Atoka. Here he was associated with Dr. Fulton for a period of one year. He married Martha Downing of Atoka in 1896. As a result of this union two sons were born: LeRoy Downing and Wendell McLean. Perhaps inspired by the career of a worthy father, the two sons studied medicine and are now carrying on the work so well begun.

In 1896 he moved to Caddo where he practiced medicine until 1903. He was the first President of the Medical Board of the Choctaw Nation, later serving as Chairman of the Medical Board for Indian Territory, and also as Secretary of the Indian Territory Medical Society. From 1903 to 1915 he lived in McAlester, devoting most of his time to surgery. In 1915 he came to Oklahoma City to accept the Deanship of the University of Oklahoma School of Medicine. In this capacity he served with distinction until 1931. During this time he was Professor of Surgery.

He was a member of the State Board of Medical Examiners from 1911 to 1915. He was a member of the Founders Group, of the American Board of Surgery, and charter member and Governor of the American College of Surgeons from the time of its organization. He was a Fellow in the International College of Surgeons. He was Past-President of the State Medical Association, the Oklahoma Academy of Science, and the Oklahoma City Academy of Medicine, and a Fellow of the Western Surgical Association. Dr. Long was Major in the Medical Reserve Corps, 1917, being placed on reserve list in 1918 as Lieutenant Colonel; in 1923, Commander General Hospital, No. 56.

In the death of Dr. Long the medical profession has lost a great champion of industry, courtesy, honor and integrity. Fortunately these sterling attributes of character have a spiritual value which should become an abiding influence in the lives of those who are left behind.

Fresh and Stored Blood Transfusions

"The incidence of all types of reactions was no greater from the transfusion of preserved blood than when fresh blood was employed, provided proper care was taken in storing and handling it," Elmer L. DeGowin, M.D., and Robert C. Hardin, M.D., Iowa City, report in The Journal of the American Medical Association. Their findings are based on a study of the results of 295 fresh blood and 2,128 stored blood transfusions.

Dr. Walter L. Rose
1876-1940

Death closed the pages on a long medical career when it came to Dr. Walter L. Rose, 64-year old pioneer Woodward physician. November 13, 1940, in the Hertzler Clinic at Halstead, Kan. His death was caused by a heart ailment.

Dr. Rose was born in Reno County, Kan., on February 18, 1876. In 1903, he was graduated from Central Medical College, St. Joseph, Mo., and in 1909 from Ensworth Medical College in the same city, his specialty being proctology and gynecology. In 1903 he received a license to practice in Oklahoma Territory, and in 1909 he was licensed to practice in the state of Oklahoma. Before going to Woodward to establish his practice, he had practiced in Hutchinson and Harper, Kan.

Dr. Rose held positions of examiner for the Kansas City Life and the New York Life Insurance companies, the Business Men's Assurance company, the Aetna Insurance company and the M K & T. Railroad Company. He was a member of the Knights of Pythias lodge, A. F. & A. M. lodge, and the York Rie Masonic bodies. He was a member of the Presbyterian church.

Surviving are his wife; a sister, Mrs. A. Roberts of Twin Falls, Idaho; and a brother, Frank L. Rose of Fairland, Indiana.

Funeral services were conducted at Lyons Kan., with the Rev. R. A. McCulloh, pastor of the Woodward Presbyterian Church, officiating.

Dr. Zachary Joseph Clark
1868-1940

The medical profession of Oklahoma lost one of its best-known and loved members Thursday, November 14, with the death of Dr. Zachary Joseph Clark, pioneer physician of Cherokee, Alfalfa County. He was 73 years of age at the time of his death. His death followed an extended illness, critical for the past several weeks.

Dr. Clark was born in Metamora, Ill., on November 12, 1868, and came to Kansas at an early age with his parents, who settled on a homestead near Cunningham, in Kingman county. Later, his father, John Clark, was a practicing attorney in Wichita for several years.

Dr. Clark was a graduate of the Kansas City Medical College, receiving his medical degree in 1900. He came that year in Ingersoll, where he made his home until 1908. In that year he moved to Cherokee where he practiced medicine until the time of his death.

The physician was outstanding in state medical circles, serving almost every year as delegate to the Association's annual meetings.

Surviving are his wife; two daughters, Hallie Clark Forde and Mary Barbara Clark Cole; and two sons, Everett E. and Robert Donovan.

Funeral services were conducted from the Christian Church in Cherokee on Sunday afternoon, November 17, with the Rev. W. A. Keller officiating. Interment was in the M. W. A. cemetery at Cherokee.

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STUDIES IN THE AVITAMINOSES



This page is the final of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the December 7 issue of The Journal of the American Medical Association.

The Exacerbation of LATENT PELLAGRA by Acute Infections

Vitamin requirements are increased by many factors, especially by acute infectious disease. Field, commenting on this phenomenon, states that the onset of pellagra may coincide with pregnancy, organic gastrointestinal disease, severe and prolonged illnesses, and dietary restriction for therapeutic purposes. The patient whose tongue is shown developed this manifestation of pellagra during the course of lobar pneumonia. After nicotinic acid therapy was started she coughed up a cast of the esophagus which consisted of a grey membrane similar to that covering the tongue. The pellagrous symptoms responded promptly to treatment.



Illustration courtesy of Virgil P. W. Sydenstricker, M.D., University of Georgia Medical School, Augusta, Ga.



Illustration courtesy of Virgil P. W. Sydenstricker, M.D., University of Georgia Medical School, Augusta, Ga.

The Coexistence of Vitamin Deficiency States

Many authors have recently presented evidence that vitamin deficiency states often are multiple. Strauss has called attention to the fact that deficiency disease in man, unlike that experimentally produced in animals, is rarely limited to a single factor. The patient whose hands are shown had partaken of a markedly deficient diet for several months. As a result, scurvy and pellagra developed concurrently. The ecchymoses of the former and the dermatitis of the latter are clearly visible. Specific therapy together with dietary adjustment led to prompt remission of these signs.

UPJOHN

University of Oklahoma School of Medicine

A Summary of the Report on Activities at the University Hospitals For the Past Summer

This past summer and early fall have been unusually busy at the University Hospitals. A compartive study of all the hospital records shows au increased activity in the number of admissions to the hospitals, the number of outpatient visits and treatments, and amount of surgery performed, over that of the corresponding months of 1939:

Statistics For the Months of June, July, August, and September

	1939	1940	Increase
Admissions:	2,083	2,299	216
Outpatient Treatments:	11,509	13,586	2,077
Surgical Operatious:	1,814	1,823	9

In addition to these general increases in patient care, there were generalized increases in the activity of the laboratories including the Clinical Pathological Laboratories, X-Ray Department, and Genito Urinary Department. The percentage of autopsies obtained has likewise increased and has been consistantly high above 50 per cent, which may be regarded as a very good record. The autopsy per cent for August was 59.3. The mortality rate has remained very good and for September was 1.5 per cent. This is a very low percentage considering the fact that many of the cases received at these iustitutions are in extremis upon admission. The increase in admissions has been made possible despite the reduction of State appropriations for the maintenance of the institutions, because of a more rapid turnover of patients due to the generalized increased activity of the Visiting and Resident Staffs. In this way, the patients' stay has beeu reduced.

During the past summer a number of interesting cases presented themselves. Among these were:

The Medical Service received a fatal case of barbiturate poisoning. An autopsy was performed aud our Department of Pharmacology found 23 milligrams of barbital iu the kidneys. They also had a case of carcinoma of the lung which had developed a very severe bromide psychosis that subsided within three weeks.

The Obstetrical Department eucountered a pregnancy with severe anemia due to Hookworm Disease. An unusual blood dyscrasia presented itself in a polycythemia vera with a leukemoid white count of myeloid type.

The Department of Orthopaedic Surgery encountered two cases of congenital shortening of the Femur.

The Eye, Ear, Nose and Throat Department had a case of screw worm infestation of the nose aud sinuses complicated by atrophic rhinitis. They had an abscess of the epiglottis with laryngeal obstruction. They also had a serious case of frontal sinusitis causing an iridocyclitis, perforation of the cornea aud a prolapse of the iris.

The Surgical Service encountered two interesting and perhaps identical cases where two boys aspirated large solitary segments of fox-tail weeds. These lodged in the right lower lobes and caused localized abscesses. Right lower lobectomies were performed with au apparent cure.

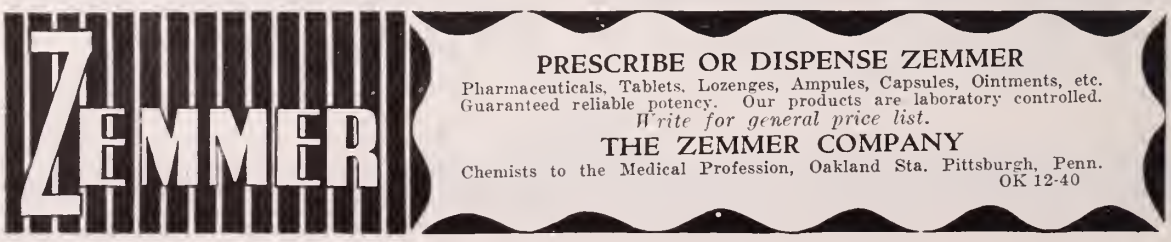
In addition to the activity in regard to the patient service, the summer was also a busy one from the standpoint of maintenance and equipment and many improvements were made. Considerable painting aud remodeling was done in both institutions during the summer. We have been able to make a slight improvement in our segregation of cases in regard to diseases and improved isolation facilities for coutagious cases by remodeling certain single rooms for isolation rooms and by the installation of steel and glass cubicle partitions. Formerly we were unable to admit any contagious cases whatever, due to the lack of isolation facilities. Contagious cases are necessary in these institutions from a teaching standpoint, however, due to certain changes, we now have six single rooms available which are called isolation rooms, so now we can admit a few contagious cases into these iustitutions for treatmeut and for teaching purposes. However, our isolatiou facilities are very much hampered and there is a definite growing need for a small isolation pavilion to care for the great number of indigent contagious cases in the State of Oklahoma. A Central Patients' Clothes Room was installed in both institutions thus removing all of the patients' clothing from the Linen Rooms on the wards, to this Central Patients' Clothes Room, thus affording better vermin control and giving additional space to ward utility rooms. The hospitals obtained, this summer, a General-Collins Emergency Lung of the latest type and is one of the few institutions in the west to have such a piece of equipment at this early date. This portable respirator works on the same geueral principles as the "Iron Lung," but is more advantageous because of its size and portability. It is extremely useful in emergency cases of asphyxia, except those having some laryngeal obstruction. A modern Central Supply Room was installed and is now under the direct supervision of graduate nurses. All of the autoclaves that were scattered throughout the hospital are now arranged in the Central Supply Room in a concealed battery. All of

Dr. L. E. Emanuel Named New Hospital Association Head

Beginning his term as new president of the Oklahoma State Hospital Association is Dr. L. E. Emanuel of Chickasha, elected to that position at the association's convention which ended November 16 after a two-day session in Oklahoma City.

Dr. Emanuel succeeds Dr. E. T. Olsen, former medical director at University Hospital in Oklahoma City, who had served as president for two years.

Other officers elected in the hospital association's closing sessions are: E. U. Benson, Cushing, vice-president; and J. O. Bush, Jr., secretary-treasurer. Doctor Emanuel was named delegate to the House of Delegates of the American Hospital Association. Approximately 100 delegates attended the two-day convention.



the sterilization of surgical dressings and instruments are now done in this room and then delivered to the units of the hospital. As an adjunct to the Central Supply Room we are now installing a "closed system" for the manufacture of intravenous fluids, replacing the "open method." This "closed system" will eliminate practically all possible contamination by pyrogens. The hospitals have been manufactnring their own intravenous saline solutions for some time at a great economy to these institutions and affording a greater variety of strength solutions. We have had a large Blood Bank for some time, which not only reduced the cost of transfusions but now permits us to give four and five times the amount of blood which was formerly given and at a lower cost. In the Blood Bank, both whole blood and plasma serum have been used. The facilities for the care of indigent negroes have been greatly improved by the setting-up of a 20-bed colored children's ward. There has been and is a general lack of facilities for the hospital care of negroes in the State of Oklahoma according to their population. In view of this fact, the University Hospitals instituted this 20-bed ward, modern in every respect, and at the same time, increased the capacity for the adult indigent negroes.

The School of Nursing and Department of Nursing Service have been improved. In the School of Nursing, a Curriculum Committee was formed which made certain changes in the curriculum, so that now the curriculnm conforms, not only to the State Board requirements, bnt also conforms to the National Leagne of Nursing standards. In addition to improving the standards of our nurses' curriculum, we have also improved the teaching facilities afforded by making a number of teaching additions to our Nursing Staff. The nursing service has been improved by the addition of several graduate nurses in certain specialized fields. Likewise, the hours of the nursing service rendered to patients have been increased. Through the cooperation of the State Board of Health and the Children's Bureau of Washington, D. C., the University Hospitals offered this summer, two Postgraduate Obstetrical Courses to licensed M.D.'s. And as both of these courses were very successful, it is intended to repeat these at certain times of the year. The University Hospitals have also established Pre-Natal Clinics which are held daily. A registered graduate nurse, working under the Department of Obstetrics, holds pre-natal classes daily in connection with the Department of Obstetrics and we are assured that these pre-natal instructions will, in the end, improve our maternal and child mortality. The Dietetic Department has been improved by the addition of new equipment and the addition of several more trained dietitians. The Visiting Staff of the Hospital has been very active. The regular departmental meetings have been held and very shortly the transactions and minutes of these meeting will be published monthly. A number of our Visiting Staff men have been called ont of town to read papers at various meetings and conventions.

Sulfanilamide for Cerebrospinal Meningitis

Sulfanilamide is a simple and highly effective treatment for cerebrospinal meningitis (inflammation of the membranes enveloping the spinal cord and brain), Kalei K. Gregory, M.D., Edward J. West, M.D., and Raymond E. Stevens, M.D., Providence R. I., state in The Jonrnal of the American Medical Association for September 28. They report a death rate of only 17.2 per cent in patients so treated as compared with 45.1 per cent in patients given antimeningococcus serum and 42.4 per cent in patients treated with meningococcus antitoxin.

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Plague Important Public Health Problem

Plague must continue to rank high as a public health problem, a recent issue of The Journal of the Americau Medical Association declares.

"The first recorded appearance of plague in the United States occurred in San Francisco on March 6, 1900," The Journal says. "In reviewing developments in this country since that time, Brock C. Hampton points out that human cases of the disease have been reported in eight states in the followiug chronologic order: California 1900, Washington 1907, Louisiana 1914, Florida 1920, Texas 1920, Oregon 1934, Utah 1936 and Nevada 1937 (the last human case was reported from Millard County, Utah, on December 4, 1939). In all, 499 human cases with 314 deaths were recorded between 1900 and January 1, 1940. Betweeu 1934 and 1939, however, only fifteen cases of plague with six deaths have been reported in the United States, and all of these but four cases and one death occurred in California. This record exists in spite of the fact that plague infection has been demonstrated in fourteen species of ground squirrels and iu red squirrels, tree squirrels, flying squirrels, wood rats, kangaroo rats, field mice, prairie dogs, chipmunks, marmots and one cotton tail rabbit, in addition to the more common infection in rats.

"The reason this widespread distribution in wild life has not resulted in more human cases may be in part explained by the sparse human settlements in those regions of extensive wild life infection. However, as records already available show, wild rodent plagues may spread unnoticed over wide areas unless intensive measures are taken to detect their presence. Further spread of the infection eastward through a rodent and human population of insufficient density to give rise to explosive epidemics may, however, eventually bring the disease within striking distance of the rat aud human populations of large cities. Here the disease may become epidemic in the presence of a sufficiently high population of rats and a sufficiently high flea index to provide favorable conditions for human infection. Furthermore, as rightly emphasized, the relatively small number of cases of plague during the past forty years does not indicate that too much prominence has been accorded that disease, since its ability to surmount the barrier of quarantine, its persistence and gradual biologic and geographic spread and the difficulty of eradicating it must continue to place it high in the rank of public health problems.

"The extensive available knowledge of plague prevention and control and the exercise of constant vigilance should guarantee, however, that it need not be permitted to occur in epidemic form in any locality in the United States."

NORTHWESTERN U.'S NEW ABBOTT HALL HOUSES EIGHTY MEDICAL STUDENTS

Eighty fledgling doctors are among the students who are "living high" at Northwestern University this year iu the new 20-story Abbott Hall, believed to be the tallest building in the world used exclusively as a university dormitory. Housing 850 students on the university's Chicago campus, where the medical and dental schools and the school of law are located, the new building is 210 feet tall and cost more than $1,750,000.

It is a city in itself, with shops, libraries, dining rooms, lounges, exercise facilities including bowling alleys and squash courts, and a recreational roof garden at the tenth floor level. Across Lake Shore drive is a new saud beach on Lake Michigan.

The building was named for Wallace C. Abbott, founder of Abbott Laboratories, and his wife, Clara A. Abbott, from whose estate Northwestern University received last December a gift of $1,500,000 for use in medical, chemical, and surgical research.

Students in the medical school will live on the sixth, seventh, eighth, and ninth floors of Abbott Hall. Each residential floor accommodates 56 students and has two shower rooms, two lavatories, and a large lounge facing toward the lake.

The skyscraper dormitory is the eighth structure on Northwestern University's Chicago campus, where the professional schools and the evening departmeuts are located.

Auxiliary News

"Nothing—and I say this without the slightest mental reservation—*nothing* is as important in shaping the doctor's career as is his wife and his home. The doctor's wife must share his idealism, appreciate a standard of values held by no other group, and give to him an understanding required of few. Being a doctor's wife is both an art and a career."—Dr. Rock Sleyster, former President of the American Medical Association, and "for 36 years the husband of a doctor's wife."

Mrs. V. E. Holcombe of Charleston, West Virginia, President of the Woman's Auxiliary to the American Medical Association, probably will be in Oklahoma sometime in January. We hope to have a meeting so that everyone will have the opportunity of meeting her. Please watch this column and your newspapers for announcement of the date and place.

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NERVOUS AND MENTAL DISORDERS; ALCOHOLISM AND DRUG ADDICTIONS



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The State of Oklahoma has nine organized auxiliaries. They are: Cleveland, Garfield, LeFlore, Oklahoma, Pittsburg, Pontotoc, Pottawatomie, Tulsa, and Woodward counties. There also are some members-at-large who, having no county organizations, belong to the State Auxiliary. We would like to double or triple that number. If any other group of physicians' wives is interested in forming an organization, Mrs. W. A. Fowler, Norman, State President, will be glad to assist them in every way.

The officers of the Women's Auxiliary to the Oklahoma State Medical Association for 1940-41 are: President, Mrs. W. A. Fowler, Norman; President-Elect, Mrs. Edward D. Greenberger, McAlester; Vice-President, Mrs. A. R. Sugg, Ada; Secretary, Mrs. Jim Haddock, Norman; Treasurer, Mrs. O. E. Howell, Norman; Historian, Mrs. E. P. Allen, Oklahoma City; Parliamentarian, Mrs. Charles Paramore, Shawnee.

In the Woman's Auxiliary to the American Medical Association, which includes all members of all county and state auxiliaries, there are 24,000 members. Feeling the need of having a *well-informed* organization, the Board of Directors incorporated in the policies a circulation department of the official publication—THE BULLETIN. Through this medium, every member of the organization can have in her own hands the latest news, information, and the program of the Auxiliary in its entirety. To accept the theme and objectives of the Women's Auxiliary and not support them is dangerous in the face of today's evolution of the nation's social and economic structure. In maintaining the democracy of medicine, the individual physician's wife is a central pivot for expansion. THE BULLETIN will give you a clear picture of what is going on, what is likely to happen, what can be done about it, and what the Auxiliary can do about it. This information will come from the leading authorities of the medical profession. The subscription price of THE BULLETIN is one dollar. There are four issues annually. Send your money with your name and address to Mrs. H. E. Christenberry, Circulation Manager, Highland Drive, Knoxville, Tennessee.

LeFlore County

Mrs. Rush Wright of Potean, President of the LeFlore County Auxiliary, reports an interesting November meeting in the home of Mrs. F. P. Baker, Talihina. Guest speakers were Dr. F. P. Baker, Superintendent of the State Sanatarium, who talked on "Tuberculosis" and Dr. Noel Kaho, who gave a patient's view of the hospital and also reviewed one of his own stories written for children. There are ten enthusiastic members of this group, who have taken up Red Cross work as their special project.

Oklahoma County

There are 152 members of the Oklahoma County Auxiliary, of which Mrs. F. Maxey Cooper, 248 N. W. 34th St., Oklahoma City, is President. They have had three meetings so far, the registration coffee, the October meeting, and the November meeting. In October, guest speakers were Dr. Tom Lowry, President of the Oklahoma County Medical Association, and Dr. E. Stanley Jones, Christian missionary. In November they had reports of the meeting of the Southern Medical Association at Louisville, a large number of members of the Auxiliary having attended. This group is making layettes for underprivileged children in the Crippled Children's Hospital as their special project. The Oklahoma County Auxiliary entertained for the wives of physicians who attended the Oklahoma City Clinical Society Conference in November.

Pittsburg County

Mrs. Edward D. Greenberger of McAlester, President of the Pittsburg County Auxiliary, held the November meeting in her home. There are 15 members, whose special projects are providing cod liver oil for needy children, sending flowers to out-of-town hospitalized patients, and sewing for the Red Cross. The guest speaker at the meeting was Mrs. Walter J. Dell, who talked on "Human Milk Stations" and Hygeia articles.

Pontotoc County

The first meeting of the Pontotoc County Auxiliary was held in the home of the President, Mrs. E. M. Gullatt, in Ada. Thirteen of their sixteen members were present. They have chosen work at the hospital for their special project.

Tulsa County

Mrs. J. W. Rogers of Tulsa is President of the Tulsa County Auxiliary of 136 active and 11 honorary members. Their first meeting was held in the home of Mrs. Harry B. Stewart, 2500 E. 27th Place, Tulsa, where they had a moving talking picture show on "Tuberculosis." In December they plan to have a toy shower, the toys to be given to underprivileged children in Tulsa hospitals. They are planning to use posters to acquaint the public with the "Doctors at Work" radio program.

Classified Advertisements

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A special course in gynecological surgery may be arranged beginning January 6, 1941.

A special, intensive course in otolaryngology will be offered beginning mid March, 1941, and continue for six weeks.

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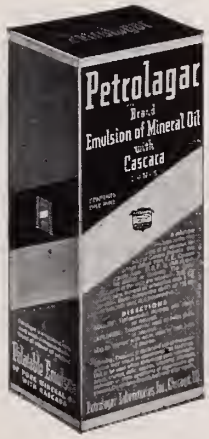
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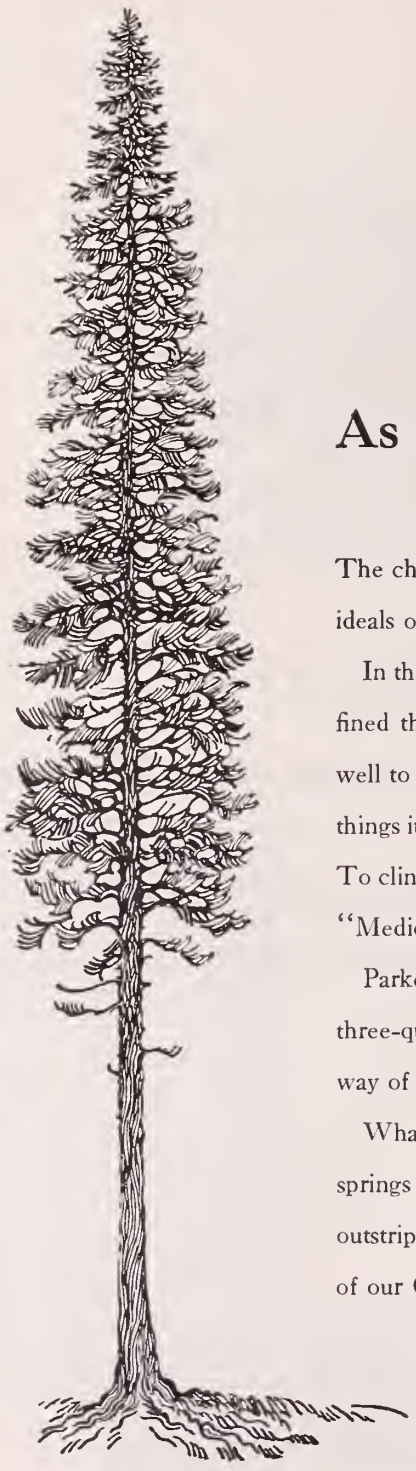
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Especially convenient when prescribing vitamins A and D for older children and adults. As pregnancy and lactation increase the need for vitamin D but may be accompanied by aversion to large amounts of fats, Mead's Capsules of Oleum Percomorphum offer maximum vitamin content without overtaxing the digestive system. 25 and 100 10-drop soluble gelatin capsules in cardboard box. Not less than 13,300 vitamin A units, 1,850 vitamin D units (U.S.P.) per capsule. Capsules have a vitamin content greater than minimum requirements for prophylactic use, in order to allow a margin of safety for exceptional cases.



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Antirabic Vaccine

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1. Patients bitten by suspected rabid animal, on any part of body other than Face and Wrist, usually require only 14 doses of Antirabic Vaccine.

Ampoule Package.....$15.00

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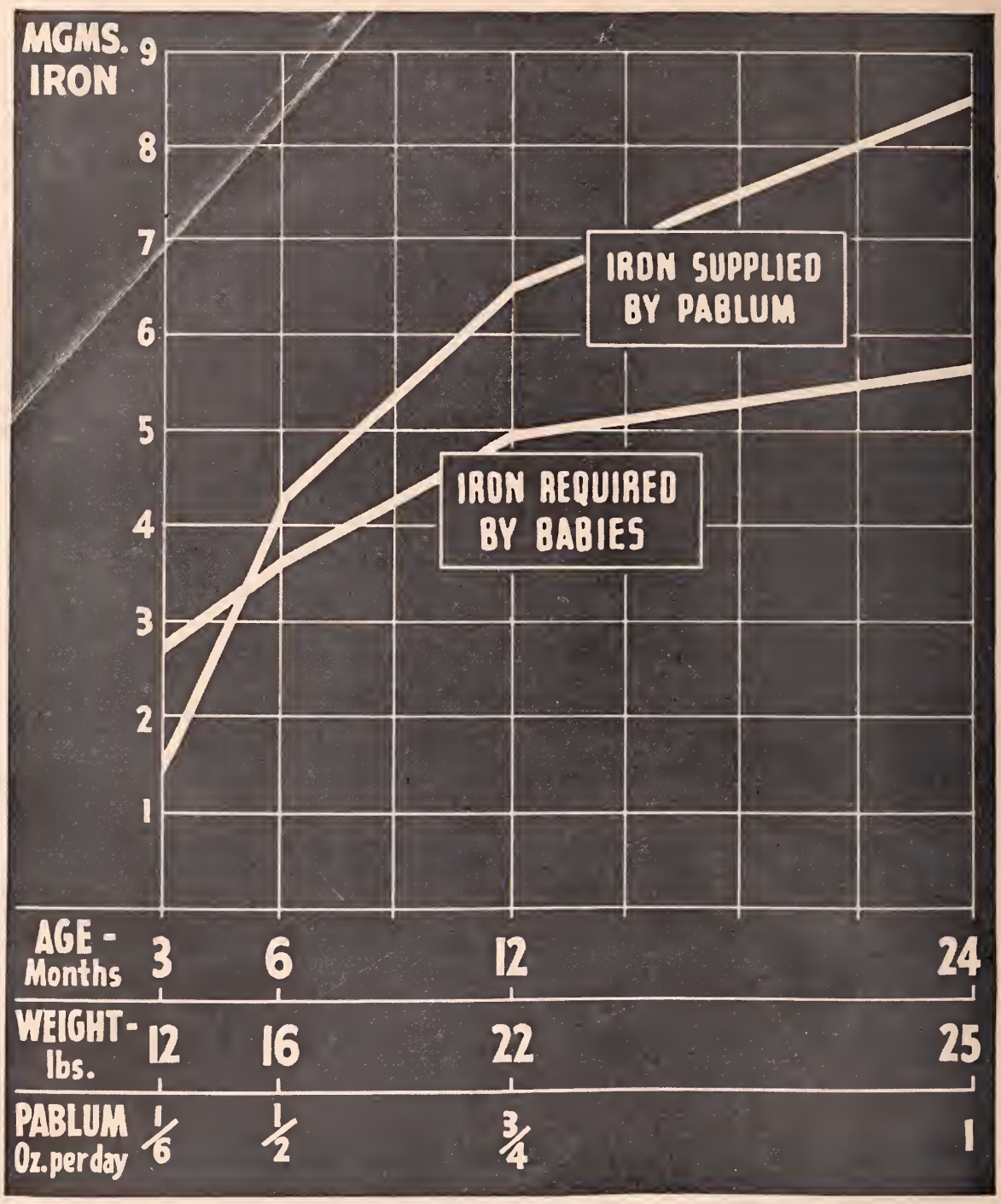
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DAILY AMOUNT OF IRON REQUIRED BY NORMAL BABIES, AND AMOUNT SUPPLIED BY PABLUM

The infant starts life with a store of iron. There is a steady drain of this reserve during the first few months. Because both breast milk and cow's milk are poor in iron, it is becoming the practice to feed iron-bearing foods at as early an age as possible. As shown in the above chart, from about the fourth month Pablum alone supplies more than the infant's daily iron requirements. In this chart, the requirements are based on the conservative estimate of the Council on Foods, i.e., 0.5 milligram per kilogram of body weight. The iron supplied by Pablum is calculated on the basis of 8.5 mg. per ounce. On account of its thorough cooking Pablum is well tolerated, having been fed without gastrointestinal upset as early as the first month. Bibliography on request. Mead Johnson & Co., Evansville, Ind., U.S.A.

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